Chapter 2
Theory and Empirical Findings in Previous Investigations

2.1 Migration and Fertility

"The vast body of empirical evidence on the origins, speed, and correlates of fertility declines in different historical and geographical settings shows more diversity than a simple theory of fertility change would predict," states Hirschmann (1994, p. 203). If one cannot expect a single theory to explain fertility and fertility changes, the picture gets even more complex in the context of international migration because different environments (at origin and destination) and the migration process itself may shape fertility behavior and attitudes not only of the migrants, but also of their relatives. The women and men who leave their region of origin and settle in a different region, i.e., the first generation of migrants, share the experience of the migration process. The migration takes place within the fertile lifespan and/or union-formation ages (or at older ages). The persons directly experience two societies when they move from one country to another, or two living environments in the case of internal migrants.

The majority of studies on fertility of international migrants have been carried out on North America, where immigration has a longer history than in Europe. Therefore, research can investigate the demographic behavior of both recent immigrant groups, and of sub-populations that have resided there for several generations and have formed minority groups. Among recent immigrants, much attention has been given to the Hispanic population in the United States (Bean and Tienda 1990), who come from countries that have higher fertility levels than the United States, such as Mexico (Bean and Swicegood 1985; Frank and Heuveline 2005) and Puerto Rico (Landale and Hauan 1996). Other immigrant groups under study mainly come from Asia, such as the Chinese (Hwang and Saenz 1997), the Indochinese (Rumbaut and Weeks 1986), and the Japanese living in the United States (Goldscheider and Uhlenberg 1969). The minority group that has been mainly studied are black Americans (Goldscheider and Uhlenberg 1969; Sly 1970). Studies have also been carried out in other traditional immigrant countries, i.e.,

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Australia (Abbasi-Shavazi and McDonald 2000, 2002; Khoo et al. 2002) and Canada (Ram and George 1990; Ng and Nault 1997).

In modern day Europe, by contrast, both immigration streams and research on immigrants' fertility are relatively recent. Although the immigration histories and immigrant groups are quite different in the "New World" than in the "Old World," most immigrant groups originate from countries that exhibit higher fertility than is prevalent in the countries of destination. Examples of this in Europe include the immigrant-worker populations from Mediterranean countries living in France, West Germany (Kane 1986, 1989; Mayer and Riphahn 2000), Belgium (Schoenmaeckers et al. 1998), and the Netherlands (Schoorl 1990; Alders 2000), as well as people from former colonies who have moved to the Netherlands (Alders 2000), and people from the Maghreb states who have moved to France (Toulemon and Mazuy 2004; cf. Sobotka 2008). The main research approach has been to compare people of different origins in the same place of destination, but some attempts have been made to compare the fertility of emigrants with that of stayers at the respective places of origin (Abbasi-Shavazi and McDonald 2002).

Whereas research on the fertility of first-generation migrants stresses the impact of the move itself and the differences or similarities between the context of origin and that of destination, the situation is different for the descendants of the actual migrants. While persons who migrated with their parent(s) as children have also experienced two living environments, the migration process itself takes place before the children reach family-formation ages. People who are born in the country or region of destination have no migration experience of their own, and come into contact with the region of the parents' origin mainly indirectly through their parents or other social-network partners, or through travel to these regions. In research on fertility of internal migrants, people of generations 1.5 (persons who migrated during childhood) and 2.0 (persons who were born to migrant parents at destination) are, in general, not considered migrants; in research on international migrants, special attention is given to the behavior of subsequent immigrant generations.

This applies also to studies on minority groups, which have been carried out mainly in the United States. As one of the classic immigration countries, researchers have been able to observe the demographic behavior of subsequent migrant generations in the United States for much longer than in Western Europe. Although West Germany and other countries in Western Europe experienced earlier immigrant waves, it has not been possible to follow the fertility behavior of the second and third generations, or of ethnic Germans in Germany, since they are not "visible" in the statistics. One may argue that both the immigration contexts and the societal contexts of the receiving countries are different in North America than in West Germany. Moreover, research on the fertility of immigrants has tended to emphasize different topics. In the United States, historically:

> ... the study of the fertility of migrants was intimately related, early in this century, to political issues and policy making needs. The issue that stimulated research was related to the extent to which immigrants and their progeny tended to dilute the "native" population of the United States. Immigrants were identified as a target population for applied social programs. (Macisco and Myers 1975, p. 111)

However, "a growing awareness of the need to incorporate the study of differentials within a major macro-structural context" developed later on (Macisco and Myers 1975, p. 111). The same applies to the Western European context, with its major demographic changes in the previous decades.

This part of the chapter therefore summarizes the theoretical framework concerning the fertility of migrants and of minority groups, and brings them together. Five main hypotheses are discussed when we analyze the fertility behavior of international or internal migrants. They refer to timing effects, the socio-demographic characteristics of migrants, and their living conditions.

2.1.1 Disruption

The underlying assumption of the disruption hypothesis is that a move itself, as well as the time preceding and following the move, is stressful for a person. For couples, migration may also mean that the two partners live separately for a certain period if they move at different points in time. Accordingly, fertility levels may decrease preceding the migration due to the anticipation of a move and/or the separation of the partners. Fertility levels may also decline shortly after the migration because of difficulties related to the migration itself, or to the new environment. International migrants, in particular, are confronted with a drastic change in the conditions of their daily lives.

Evidence for the disruption hypothesis has been found for immigrants moving to Australia (Carlson 1985a; Abbasi-Shavazi and McDonald 2000; Abbasi-Shavazi and McDonald 2002), Mexicans moving to the United States (Bean and Swicegood 1985; Stephen and Bean 1992), and immigrants to Canada (Ram and George 1990; Ng and Nault 1997). Both studies on immigrants' fertility in Canada view the disruptive effect as being of a very short duration (and the findings are probably related to the estimation method chosen, as in Ng and Nault [1997]). Increasing numbers of births after a disruptive phase are observed for immigrant women, regardless of their previous number of children. Ram and George (1990) assume that there is a desire to have additional children in the new home country.

Evidence for a disruption is also seen for the fertility of internal migrants (Goldstein 1973 for Thailand; Hervitz 1985 for Brazil). Rundquist and Brown (1989) distinguish between several types of internal migrants in Ecuador, and find that the number of children ever born decreases from non-migrants to permanent migrants and return migrants; the smallest number of children is estimated for circular migrants. In Europe, postponement of births is found for women in England and Wales who moved over long distances. However, this seemed to be not directly related to the move itself, but to that fact that women with higher levels of education moved over longer distances than people with lower levels of education (Grundy 1986).

Other studies do not find evidence for a fertility-disruption effect of international migration. Andersson (2004) estimates birth risks separately by birth order, and

finds strongly elevated first-birth risks, and slightly elevated third-birth risks for immigrants in Sweden:

> In particular, it is noteworthy that these birth risks are elevated already in the first twelve months after such a migration, which means that many of the children born in Sweden were actually conceived before the registered immigration to Sweden ... Our findings of elevated levels of childbearing immediately after a migration to Sweden give no immediate support for the notion of "disruptions" in childbearing in connection with international and other long-distance migration. If such disruptions indeed are important, then they must take place well in advance of any migration, thus being related to a postponement of the childbearing in anticipation of such a possible event. (Andersson 2004, pp. 767, 771)

Frequently, elevated birth rates shortly after migration are interpreted as constituting catch-up behavior for postponed or interrupted childbearing in the phase immediately preceding and during the migration (Goldstein and Goldstein 1981 for internal migrants in Thailand; Ford 1990 for immigrants to the United States; Toulemon and Mazuy 2004 for immigrants to France).

2.1.2 Interrelation of Events

Rather than assuming that elevated birth transition rates shortly after immigration constitute catch-up behavior, we could instead assume that the higher rates result from a situation in which several events take place at the same time: namely, migration and union formation (Mulder and Wagner 1993; Singley and Landale 1998). Evidence for the latter assumption has been found for international migrants, as well as for internal migrants. This seems to be a universal pattern, in particular for the first child (Lindstrom 2003 on Guatemala; Andersson 2004 on Sweden; Kulu 2005 on Estonia; Kulu 2006 on Austria and Poland; Nedoluzhko and Andersson 2007 on Kyrgysztan).

Singley and Landale (1998) compared the likelihood of a first birth of several groups of Puerto Rican women. Their analysis reveals that single women migrating to the United States were much more likely than their non-migrant counterparts in Puerto Rico to form unions and to have a first child. The authors conclude that migration to the United States is to be seen as a part of the family building process for many Puerto Rican women. Lindstrom and Giorguli Saucedo (2007) draw similar conclusions about the interrelation between fertility and migration from Mexico to the United States: Women who move to the United States exhibit significantly higher first-birth risks than women who stay in Mexico. This suggests a connection between migration and family formation, as a child born in a destination country is believed to strengthen the legal status of the parents there. Similarly, Andersson's (2004) study on immigrant fertility in Sweden reveals elevated levels of childbearing during the first couple of years after immigration to Sweden.

One may expect childbearing to start soon after migration and marriage, particularly among marriage migrants, who constitute a special type of family reunion.

This was proven, for example, for immigrants from Turkey and Morocco in the Netherlands (Schoorl 1990; Alders 2000).

Yet also among couples who are married but still childless, migration and first birth are often interrelated:

> Births are not only delayed or averted as a consequence of migration, but migration as well is initiated, postponed, or deterred as a consequence of births ... Married women (here: from Mexico) are most likely to migrate to the United States before or in the same year as the first birth. Once the first birth occurs, however, the likelihood of migration decreases progressively with each additional birth. (Lindstrom and Giorguli Saucedo 2007, p. 849)

Single migrants, by contrast, may also have to spend a longer time searching for a partner. Carlson (1985a) showed elevated marriage ages for first-generation immigrants moving to Australia when they were single; Milewski (2003), for first-generation immigrants to Germany. Hence, it is important to consider the partnership status of a migrant. However, once married, the fertility levels of former single migrants do not seem to be influenced by migration (Carlson 1985a). Meanwhile, Ng and Nault (1997) observe lower fertility levels among some Asian immigrant groups to Canada because of their high share of unmarried women.

2.1.3 Adaptation

While the hypotheses of disruption and interrelation of events focus on short-term impacts of migration, the adaptation hypothesis offers a medium-term perspective. Given that fertility patterns vary between the regions of origin and destination, a convergence may be achieved within some years of residency (shown by Iutaka et al. 1971 for internal migrants in Brazil; Rindfuss 1976 for Puerto Ricans to the United States; Bach 1981 for internal migrants in Malaysia; Farber and Lee 1984 for rural–urban migrants in Korea; Hervitz 1985 for internal migrants in Brazil; Nauck 1987 for Turks in Germany; Ford 1990 for the United States; Ram and George 1990 for immigrants in Canada; Schoorl 1995 for European countries; Mayer and Riphahn 2000 for labor migrants from Mediterranean countries in Germany). This resemblance may be triggered mainly by two channels: cultural factors and/or socio-economic conditions.

Studies which pay attention to the role of socio-economic conditions in fertility differentials between immigrants and the population at destination mostly refer to "New Home Economics," as defined by Becker (1981). This theory centers on fertility as the result of household decisions about the allocation of scarce resources (mainly time and money) for the acquisition of commodities (such as children). As individuals are assumed to strive for a maximization of productivity and utilities while minimizing costs, persons who share a household may specialize in different forms of productivity. A labor division is likely to occur. For women, this mainly means that family and household work on the one hand, and labor-market activity on the other, may appear to be competing careers. Consequently, it is assumed that

women must decide between having a family and having an occupation, particularly if the society does not provide a context that allows combining the two domains.

The problem of incompatibility occurs among immigrants as well as among the population of the destination. However, immigrants, especially of the first generation, may be affected by these economic considerations to a greater extent: immigrants may have higher costs in order to achieve a utility of a level that is similar to that of a non-migrant at destination in a comparable situation, or they may never be able to attain a similar level. This can result, for example, from a command of the language at destination that is not sufficient, or from an educational background that is not applicable in the new context.

Kreyenfeld and Konietzka (2002) show, for example, that immigrants in Germany cannot utilize their education in the German labor market to the fullest, and Maani (1994) has drawn similar conclusions about first- and second-generation immigrants in Australia. If the costs of achieving a sufficient position in the labor market are too high, one may hypothesize that immigrant women are more likely to withdraw from work and engage more in family life, including having a higher number of children than persons of the majority population (Andersson and Scott 2005). By contrast, Goldscheider and Uhlenberg (1969), Bean and Tienda (1990), and other authors argue that women of immigrant groups or minority populations who have achieved a comparatively good position in the labor market may not take the risk of losing this position by having (additional) children, and may therefore reduce their family size to a number that is even smaller than that of the respective majority population. Rumbaut and Weeks (1986) found that refugees from Indochina to the United States who are employed had lower fertility than non-employed women (cf. Massey 1981).

Andersson and Scott (2005) suggest that immigrants' decisions about whether to engage in fertility behavior, join the labor force, or attempt to balance work and family depends on general societal conditions. In Sweden, for example, where "no general pattern of a very pronounced incompatibility between childbearing and labor-force participation for the majority of native-born women" (Andersson and Scott 2005, p. 23) can be observed, immigrant women (though not equally integrated into the labor market) show the same demographic responses to labor-market positions as Swedish-born women: women who are not established in the labor market are not very likely to become mothers, while women who are gainfully employed are more likely to have a first child the higher their income is. For a first birth, they find elevated transition rates for both foreign-born and Swedish-born women who are employed, compared with women who are not established in the labor market (Andersson and Scott 2005). They show that a similar positive, although weaker, association between labor-market attachment and fertility also exists in terms of the propensities of having a second and a third child, which Andersson and Scott (2007) attribute to the equalizing effect of the Swedish welfare state. Therefore, Andersson and Scott (2005, 2007) point out that a convergence of the fertility behavior of immigrants and that of the host society is not due to acculturation, but can be seen as adaptive behavior to the general situation in the host society, as well as to the host country's social, political, and labor-market conditions.

Andersson (2004) shows that immigrants from non-Nordic countries in Sweden react to changes in family policies similarly to women born in Sweden or in another Nordic country, though slightly later. Taking the duration of stay in Sweden into account, he sees a "rapid adaptation" of immigrants' fertility to Swedish-native behavior, since the transition rates to the respective parities are similar for immigrants and Swedes after a 6-year stay.

Lindstrom and Giorguli Saucedo (2007) interpret the low second- and third-birth levels of Mexicans in the United States as indicating that first-generation immigrants rapidly adopt the lower fertility practices that are dominant in the United States.

For immigrants to Israel, Friedlander and Goldscheider (1978; cf. Friedlander et al. 1980) observe an adjustment in the timing of births to the respective socio-economic circumstances. Adaptive behavior starts immediately following immigration. "The convergence of fertility *within* ethnic groups and the great convergence of fertility *between* ethnic groups is remarkable evidence of rapid fertility response appropriate to societal changes" (Friedlander and Goldscheider 1978, p. 313). The speed of converging behavior depends on the degree of difference between the socio-demographic patterns of the respective countries of origin and destination (Coleman 1994).

From a historical perspective, socio-economic circumstances as channels of adaptive behavior were also found among Norwegian immigrants to the United States a century ago (Gjerde and McCants 1995). In the middle of the twentieth century, increasing education was seen as the most important factor for the rapid convergence of fertility behavior of second-generation Italians with U.S. patterns (Rosenwaike 1973).

Whereas most of the studies on family dynamics of international migrants focus on persons moving from a higher- to a lower-fertility context, and observe a convergence between native-born and new residents, a convergence can also be observed for those moving from a lower- to a higher-fertility environment, as it is the case for immigrants from the former Soviet republics to Israel. Nahmias (2004) explains that this behavior is related to better socio-economic circumstances that are conducive to having more children than in the country of origin. Hwang and Saenz (1997) also observe increased fertility for immigrants to the United States from the People's Republic of China, where one-child policies dominate fertility behavior.

As for any cultural channels of adaptation, the evidence is far from pointing in one direction. Fertility adaptation may have parallels in, or be inter-related with, other processes, mainly the choice of a marriage partner. Saenz et al. (1994) observe lower fertility rates for Asian women in the United States who are married to an American, compared to Asian women who are married to an Asian partner. Where culture allows for out-marriage, fertility behavior may also be expected to resemble that of the population at destination.

Another indicator for cultural adaptation used is non-marital childbearing. Singley and Landale (1998) show for immigrant women from Puerto Rico to the United States that they have a higher risk of having a first birth outside marriage compared to their counterparts at origin.

However, certain aspects of the immigrants' culture may be more resistant to adaptive behavior. For example, another factor influencing the changing cultural patterns discussed is the use of contraceptives. One may hypothesize that immigrants adopt innovative behavior, such as using birth-control methods, in a manner similar to that of the people at destination. Therefore, fertility may show similar developments. However, after investigating the use of the pill in Israel by several immigrant groups, Okun (1997) contradicts this assumption: for women stemming from Asia and Africa, these "findings thus identify the existence of cultural barriers to the adoption of new behavior by a disadvantaged subgroup" (Okun 1997, p. 334), controlling for religiosity and socio-economic covariates.

Ware (1975) shows differences by religious affiliation for immigrant women in Australia. In general, religion is seen as enhancing a sub-culture of certain immigrant groups in Australia, in particular for Muslim people (Abbasi-Shavazi and McDonald 2000) and Orthodox Greeks (Ware 1975; cf. Abbasi-Shavazi and McDonald 2002), which coincides with lower socio-economic status. Among immigrants from the Mediterranean countries:

> ... there are culturally distinctive behaviour patterns, most especially those which are associated with the Orthodox Greeks as opposed to the majority of Catholics. However, the most significant explanation of differences between the Southern-European-born immigrants and the native-born population is not through culture conflict in the more restricted sense of the term, but through differences in socio-economic status. The behaviour of the mass of scantily educated, unskilled, poor, Southern European immigrants is not very different from that of native-born wives who are equally under-privileged. (Ware 1975, p. 376)

In literature on fertility of internal migrants, differences in cultural patterns are seen as contributing to migrants' fertility differentials. As cultural customs (mainly attitudes and use of contraceptives) change with increasing time of residence at destination, fertility levels between migrants and non-migrants converge. Jensen and Ahlburg (2004) show this for the fertility of rural–urban migrants in the Philippines, Lee (1992) for Cameroon, and Umezaki and Ohtsuka (1998) for Papua New Guinea.

Adaptation to the type of settlement has been found in studies on fertility of internal migrants in Europe, as well. Courgeau (1989), exploring longitudinal data, examined the fertility of rural–urban and urban–rural migrants in France for pre-war birth cohorts. Urban–rural migrants adapt to the behavior dominant in the rural areas, and have an increase in fertility.

For rural–urban migrants, however, it is demonstrated that these migrants are a selected group; their fertility decreases according to their fertility preferences. For example, Kulu (2005) shows for Estonia that migrants, independent of their origins, exhibit fertility levels similar to those of non-migrants at destination, whereby fertility is higher in rural areas. Explanations for the discrepancy between fertility levels in rural and urban areas include differences in housing conditions, as rural areas provide larger living spaces than in cities, and speculation that traditional family norms and values are more strongly maintained in rural areas than in cities.

2.1.4 Socialization

An alternative assumption is offered by the socialization hypothesis. This hypothesis emphasizes the role of the migrants' socialization by focusing on the values, norms, and behavior dominant during a person's childhood, and assumes their continuance during the life course. Accordingly, immigrants may follow the fertility patterns as perceived in their country of origin, even if they differ from that of the host society. Immigrants from different countries of origin that exhibit different fertility patterns may show the same fertility differences in the country of destination. This has been proven for immigrants in several Western European countries (Schoorl 1990; Alders 2000; Andersson 2004), as well as for several origin groups to the United States (Massey 1981; Kahn 1988).

Andersson (2004) finds differences by country groups of origin, mainly higher birth risks at parity three and higher for women from countries with a Muslim tradition (Turkey, Arab-speaking countries in the Middle East and North Africa, Somalia), compared to other immigrant groups and native-born persons in Sweden. Whereas this analysis does not control for socio-economic indicators and is rather difficult to interpret, the follow-up study of Andersson and Scott (2007) looks at labor-force participation. Again, they find that immigrant women from (most) high-fertility countries (Somalia, Turkey, and Vietnam) have significantly higher second- and third-birth propensities than Swedish-born women, thus providing evidence of socialization effects along with adaptation processes, which become visible when examining transitions to a higher-order parity.

Evidence for the socialization hypothesis also comes, however, from studies on fertility of internal migrants (Hervitz 1985 on Brazil).

The long-term impact of migration can be observed in the fertility behavior of second-generation immigrants who are exposed to their parents' behavior, values, and norms; as well as to those prevailing in the receiving country. If the societal environment during childhood and adolescence was dominant in a meaning-giving system, the second-generation women who are born in the new destination to immigrant parents would consequently display behavior typical of the destination; i.e., behavior that differs from their parents' behavior. This has been discussed mainly as the assimilation hypothesis in the U.S. context. Whereas in the past, these generational differences have been seen as a continuous process (Gordon 1964; Kahn 1988; Stephen and Bean 1992), more recent research allows for a more diversified picture. Portes and Zhou (1993) point out that a process of adaptation should be seen as segmented or selective assimilation. In the U.S. context, the authors suggest three possible outcomes of an assimilative process: acculturation and integration into the white middle class, assimilation into a permanently poor underclass, and rapid economic advancement with deliberate preservation of the ethnic community's ties. Studies show that children of immigrants remain in their co-ethnic community because this is regarded as the best strategy for capitalizing on material and moral resources otherwise not available (Portes and Zhou 1993). Fertility is, however, not considered in the literature on segmented assimilation

since it focuses primarily on childhood and adolescence (cf. Portes and Rumbaut 1996, 2001).

Regarding fertility behavior, results for the subsequent immigrant generations at several destinations do not show a uniform picture, and it has been demonstrated that the various groups at the same destination do not follow a similar pattern (Kahn 1994). One may, however, identify one general trend: fertility levels of second-generation women are, in the main, between those of the first immigrant generation, and the birth rates of the majority population at destination (Kahn 1988 for the United States; Stephen and Bean 1992 for Mexican-origin women in the United States). Landale and Hauan (1996) observe a convergence between second-generation immigrants from Puerto Rico in the United States in terms of a delay of marriage, and an increasing share of non-marital births.

No common pattern is found for second-generation immigrants in Australia. Immigrants with a background that resembles the Australian one (like persons from other Anglo-Saxon countries) display fertility behavior that is more similar to Australian fertility behavior than do persons with a background that differs from that of Australians (Khoo et al. 2002; cf. Abbasi-Shavazi and McDonald 2000). By contrast, for first- and second-generation immigrants from Greece and Italy (but not for other nationalities), Abbasi-Shavazi and McDonald (2002) find in another study that their fertility levels closely resembled the levels, trends, and age patterns of the respective country of origin. Therefore, they argue for the importance of "cultural maintenance" (Abbasi-Shavazi and McDonald 2002, p. 70). This formation of a sub-culture is supported by several factors; if, for example, these groups are large and live geographically centered, the communities maintain youth groups and weekend schools in the native language, and they run newspapers.

A non-uniform picture is seen for the still relatively young second immigrant generation in Western European countries. Alders (2000) notes that the fertility levels of women of Turkish and Moroccan parents fall between the levels of their mothers' generation and that of Dutch women, whereas women from Suriname and the Antilles exhibit lower levels than Dutch women (cf. Garssen and Nicolaas 2008). In Belgium, Schoenmaeckers et al. (1998) observe differences in fertility patterns of women of Turkish and Moroccan descent, including lower fertility levels for the second generation of both groups compared to the first generation. Turks enter motherhood earlier than Moroccans, but have a preference for a smaller family size than Moroccans. However, differences are observed by educational attainment: immigrant women with a secondary education have a smaller number of children in both groups (see also Ford 1990 for the United States; Ng and Nault 1997 for Canada).

2.1.5 Selection and Characteristics

Since both international and internal migrants are a selected group, most of the studies that control for country of origin also take the socio-demographic

characteristics of migrants and non-migrants into account. They find fertility differentials reduced when controlling for these factors. Therefore, the hypotheses on socialization, adaptation, disruption, and interrelation of events can only be proven when selection effects of immigrants and socio-demographic characteristics of both native-born and migrant population are simultaneously considered.

The selection hypothesis predicts convergence of fertility patterns between immigrants and their counterparts in the host society because migrants are assumed to share the fertility intentions of the persons at destination. Hence, immigrants may not have the fertility intentions dominant in their country of origin, but may instead have intentions similar to those of the receiving country. This selection can result from observed characteristics, such as education triggering migration (cf. Wagner 1990), or from unobserved factors, such as social-mobility ambitions or family proneness. On the other hand, these two traits can also be seen as opposed to each other, and can have the opposite effect on fertility. Both mechanisms have been observed for international and internal migrants throughout the world, whereby selection effect and adaptive behavior may sometimes be hard to distinguish (Macisco et al. 1969, 1970; Zarate and Unger de Zarate 1975; Hiday 1978; Sabagh and Yim 1980; Bach 1981; Massey 1981; Kahn 1988; Schoorl 1990; Goldstein et al. 1997; Hwang and Saenz 1997; Frank and Heuveline 2005; Kulu 2005).

When the characteristics of the population at destination have been taken into account, a selection effect has been found mainly for migrants to urban areas. Internal migrants in France and in Peru who moved to urban areas are found to be a selected group who tend to favor lower fertility behavior, compared with migrants who moved to rural areas and adjusted their behavior to the higher fertility prevalent there. Reasons for this difference can be seen in the size and cost of locations (Courgeau 1989; White et al. 1995). Macisco et al. (1970) trace low fertility levels among young migrants in Puerto Rico back to their social-mobility ambitions, which would be hampered by having (additional) children. Myers and Morris (1966) raised the question of whether the low fertility levels of migrants should be interpreted within the context of disruption, or of selection (but they did not distinguish between origins in their study).

Earlier studies on fertility of rural–urban migrants in the United States, Puerto Rico, and in Latin America had suggested with relatively high consistency that migrants arriving in urban areas have a higher fertility rate than non-migrants in cities. This difference decreases when socio-economic factors can be considered. Migration from rural areas is most often associated with lower levels of education, an inferior occupational situation, and less income – factors that are associated with higher fertility in general (see for a summary: Zarate and Unger de Zarate 1975; Hutchinson 1961 on Brazil; Rundquist and Brown 1989 on Ecuador). For pre-baby boom cohorts in the United States, it has been argued in several studies that fertility differentials within urban settlements by socio-economic status may vanish in the future, and that differentials between "urbanites" and migrants from rural areas to cities can be explained by the lower socio-economic status, as well as the traditional family values and gender-role patterns of the groups with farming backgrounds (selection) (Goldberg 1959; Duncan 1965). Freedman and Slesinger (1961) find

fertility differentials by socio-economic background between rural–urban migrants and urbanites in the United States, but also point out that the farm population "is increasingly subject to urban influences, even when they do not migrate" (Freedman and Slesinger 1961, p. 172). Duncan (1965, p. 249) sees either a two-generational urban experience, or the attainment of higher levels of schooling as triggering "modern" (i.e., lower) fertility patterns.

McGirr and Hirschmann (1979) contradict the "urbanites" hypothesis, and stress that there is no clear link between socio-economic status and region of origin for later birth cohorts. Hence, fertility differentials within cities cannot be explained by the distinction between farm and urbanite backgrounds. Small fertility differentials by socio-economic status may have been the exception for women in urban areas for certain cohorts. They prove the results by Ritchey and Stokes (1972), who find an inverse association between socio-economic status and the number of children ever born for both non-migrants in urban areas and migrants. Ritchey and Stokes (1972) also stress that both the size of the area of residence and migration have independent effects on fertility. When controlling for the size of the place of residence and of origin, internal migrants in the United States have higher fertility than non-migrants.

When we compare the hypothesis of selection to other hypotheses, one may consider the hypothesis of interrelated events (marriage and migration) to be part of the selection hypothesis; however, treating it separately seems more appropriate. This is because the interrelation effect may occur only once, i.e., shortly after migration; but completed fertility levels tend to differ between migrants and the people at destination – not due to adaptive behavior, but due to long-term fertility intentions (selection). The "fertility-emancipation" results by Hwang and Saenz (1997) seem to prove this; women from the People's Republic of China (where the one-child policies keep fertility low) who migrate to the United States have higher fertility rates after arriving in the United States than Chinese groups who move from other Asian countries to live in the United States.

However, the hypotheses of adaptation and selection may be hard to distinguish. Schoorl (1990), for example, shows that immigrant women of Turkish and Moroccan descent who live in the Netherlands have about one child less than stayers in the respective country of origin, but the number of children born prior to the emigration was of a similar level compared to stayers of the respective age group. Schoorl (1990) therefore argues that reduced fertility after migration is caused by an adaptive process at destination (since the average number of children of Dutch women in her study is about half of the Turkish and Moroccan number). However, if a selection effect can be observed only on the completed number of children, one cannot distinguish selection from adaptation in this case. Or, generally speaking, selection may be "operating, either at the point of origin or in the fertility adjustment to migration" (Goldstein 1973, p. 237).

Fertility differentials may be caused by socio-economic differences between migrants of different origins and/or between migrants and people at destination (Jaffe and Cullen 1975; Kahn 1988, 1994; Coleman 1994; Ng and Nault 1997). The main factors that explain fertility differentials between immigrants and their

descendants, and the indigenous population at destination, are not just levels of educational attainment; but also rural/urban origin, the share of female labor-force participation, and the proportion of married women living with their husbands (Jaffe and Cullen 1975; Rumbaut and Weeks 1986; Stephen and Bean 1992).

One also has to take modernization into account. Subsequent waves of migrants may be different from their predecessors; they may, for example, be less conservative than previous migrants. That is, earlier migrants may have responded to changes in their environment by conforming more closely to older behavior patterns, including higher fertility levels. By contrast, more recent migrants, motivated by improved communication, more education, and higher levels of modernization, may be leaving their old environments in order to achieve new goals, and may therefore be more willing to forego the old in favor of new behavioral patterns, including even lower fertility than non-migrants at place of destination (Goldstein 1973).

When considering international migrants, many studies do not distinguish between migrant generations. This may not be necessary in contexts where the second generation has not yet reached family-formation ages by the time of the respective study; however, in some contexts they have. Schoorl (1990) categorizes immigrant women of Turkish and Moroccan descent in the Netherlands by type of family reunion. Primary family reunion is defined as a case in which a couple was married prior to the migration, but the spouses moved at different points in time, and therefore experienced a phase of longer spatial separation. Secondary family reunion is defined as the immigration of marriage partners of second-generation immigrants. When using the indicator of the family-reunion type, remarkable differences appear between the two types for both women of Turkish and Moroccan descent: Turkish-origin women of the secondary family-reunion type have a 0.8 smaller number of children ever born than Turks of the primary family-reunion type (controlled for age). For Moroccans, this difference is 0.9. However, these differences are explained by socio-demographic differences between the primary and the secondary reunion types for both immigrant groups: the children of the labor migrants are distinguished from the first immigrant generation by being younger, having a better education, originating more often from urban areas, having a better command of the Dutch language due to their younger ages at immigration, and, coinciding with these factors, also knowing Dutch society better. Moreover, the ties to the respective country of origin may have weakened (Schoorl 1990).

A cross-over is, for example, observed for Mexican-U.S. migrants. Whereas earlier Mexican emigrant cohorts had lower fertility rates than the stayers in Mexico, today the opposite is the case. “Migration increasingly may be selecting women with socio-demographic profiles that are conducive to higher fertility patterns, such as women with a lower educational level from more rural and/or marginalized areas that are characterized by higher fertility norms” (Frank and Heuveline 2005, p. 97). A comparatively low socio-economic status may also be inherited by second- and third-generation immigrants, which can be interpreted from a racial-stratification perspective: differential opportunity structures channel

fertility behavior in a way that younger women who face lower opportunity costs because of their lower socio-economic status engage in early and high fertility (Frank and Heuveline 2005).

2.1.6 Legitimacy

Finally, another hypothesis has been increasingly discussed in recent years: the "legitimacy" hypothesis investigates a causal relationship between international migration, legal status, and demographic events, such as child birth (Bledsoe 2004; Bledsoe et al. 2007; Fleischer 2007). The assumption is that if international migrants aim at gaining nationality by giving birth in a respective country of destination, this would be reflected in relatively high transition rates to a birth soon after arrival. Therefore, migration and childbearing could be special cases of the hypothesis on the interrelation of events.

Though the hypothesis has not received much empirical grounding yet, there is also evidence that persons who originally immigrated for different reasons, such as attending university, may not want to leave the country, and may therefore see childbearing (or marriage) as an option for securing the right to stay in the country of destination (Fleischer 2007). Therefore, we think that births would tend to occur on a mid-term scale only after a migrant has spent a certain time span at destination. Hence, the legitimacy hypothesis must be seen as a separate one.

2.1.7 Minority Groups

Up to now, the impact of migration on individuals has been discussed. The emphasis is on the experience of two societal contexts, on the migratory event, and on the related changes in a person's life, or on the lives of her or his children over time. Since descendants of international migrants are not directly affected by the migration process of their parents, especially if they were born after the move, it is worth paying attention to the theoretical framework of fertility behavior of minority groups, too. The minority-group argument has been brought up mainly in the U.S. American context (Goldscheider and Uhlenberg 1969), but was also later applied to the European (Van Heek 1956; Kennedy 1973) and Asian contexts (Poston et al. 2006). In the main, studies on fertility behavior of minority groups have been carried out in countries with relatively low fertility levels, and in places where the fertility of women in minority groups exceeds that of the majority (e.g., Goldscheider and Uhlenberg 1969 on different minority groups in the United States and in Canada, Sly 1970 on the United States, Roberts and Lee 1974 on the United States, Bean and Tienda 1990 on Hispanics in the United States).

Minority groups and immigrant groups may overlap or be distinct from each other; or a group of migrants may develop gradually into a minority group over time

and generations (Coleman 1994). Bean and Tienda (1990, p. 210) list four criteria which characterize minority groups. These are:

- Each of the sub-groups constitutes only a small share at the total population of a country
- Members of the particular group experience a sense of self-awareness as belonging to the group as its members
- Members of the particular group experience a degree and kind of discrimination by members of the majority group and
- The members of the particular group are to some extent discernible in their appearance as its members.

The criterion of physical appearance is mainly used in the U.S. debate where it refers to classifications by skin color (race). However, modifications of these criteria are applied to different contexts. Kennedy (1973) emphasizes social cohesion between group members who share religious affiliation in Ireland and Northern Ireland. Poston et al. (2006) use recognition by the government of specific nationalities (*minzu*) as the criterion for defining minorities in China, where the members of the *minzu* are hardly or not at all distinguishable by physical appearance from the majority population of China (*Han*).

If groups of people can be defined as minority groups, and differences in fertility behavior occur between the minority and the majority groups, four hypotheses are in general posited in order to explain fertility differentials. As in the case of theories on fertility behavior of internal and international migrants, these hypotheses emphasize different factors affecting fertility behavior, including social psychological features (minority-group status), socio-demographic characteristics, as well as economic and cultural factors (Bean and Tienda 1990). The four hypotheses are not exclusive, and do not possess sole explanatory power. They cannot be clearly distinguished from each other, either.

2.1.8 Socio-Demographic Characteristics and Economic Arguments

Like the framework on fertility of migrants, the first hypothesis addresses the assumption that minority groups and majority groups are different in their socio-demographic composition. Given fertility differentials between minority and majority populations, these differences are assumed to be caused by the compositional differences between the populations. A convergence in socio-demographic structures between groups may lead to a convergence of fertility behavior, as well. This mainly refers to (higher) education, occupation, and income; but also to age structure, marital status, and other factors (Bean and Marcum 1978; Bean and Tienda 1990).

Evidence for this hypothesis is found in nearly all studies: “Clearly the *social characteristics* approach is correct in its prediction that differences in characteristics

will account for a large part, if not all, of the fertility differences" between Hispanic women of the first, second, and third generations in the United States, and U.S. American women (Bean and Tienda 1990, p. 230, 231; also: Goldscheider and Uhlenberg 1969; Sly 1970; Roberts and Lee 1974; Poston et al. 2006).

Related to the hypothesis of structural similarities, the economic hypothesis is rooted in the economics of the family (Becker 1981) that regards fertility as the result of household decisions about the allocation of scarce resources (mainly time and money) for the acquisition of commodities (such as children). Several authors discuss the economic hypothesis as a separate hypothesis in the context of fertility of minority groups. But, since the general line of argumentation applies also to the majority population, it can hardly explain differences between minority and majority as such. One reason for seeing it as a separate theory is the magnitude of difference: group differences are the greatest where the potential earning differences are the greatest. Thus, if minority women with higher levels of education are able to achieve similar levels of earnings compared with majority women of levels of higher education, their fertility will be similar as well (Bean and Tienda 1990). In this respect, this hypothesis is similar to the hypothesis of socio-demographic characteristics.

Even though compositional differences and economic arguments explain a large part of the fertility differences between minority groups and majority population, they cannot account for all the differences (Goldscheider and Uhlenberg 1969; Massey 1981; Bean and Tienda 1990; Poston et al. 2006). Furthermore, when controlling for social characteristics, different minority groups in the same country show different fertility behavior. Goldscheider and Uhlenberg (1969) find fertility rates higher among Catholics in the United States than among the white majority (Protestant) population, but lower fertility levels for Jewish, black, and Japanese Americans living in Canada or the United States. Bean and Tienda (1990), for example, estimate higher fertility levels for Mexican-origin women in the United States, but lower fertility for women of Cuban, Puerto Rican, and Central/South American origin, compared to white American women.

Therefore, the literature offers two "residual" hypotheses.

2.1.9 Independence-Effect: Sub-Culture and Minority Status

The two residual explanations can also be seen as opposite outcomes of the same factor. This effect is called independence effect; its two aspects are the sub-culture hypothesis[1] and the minority-status hypothesis.

[1]In general, demographic studies have increasingly focused on the role of culture in order to explain certain demographic differentials between (sub-)populations that show similar socio-economic characteristics (Hammel 1990; Bernardi and Hutter 2007).

The sub-culture hypothesis has been derived from the fact that many of the minority groups residing in the United States originate from countries that have a tradition of higher fertility, such as Mexico, than that of the United States. According to this theory, members of an immigrant-origin sub-group may preserve values, norms, and behavior concerning family and fertility that are common in the respective countries of origin (familism). Therefore, fertility levels may be higher among women of minority groups than among women of the majority population, even when taking social characteristics into account (Bean and Tienda 1990).

The main indicator for any kind of sub-culture used in previous studies is religious affiliation. It seems, however, that religion has hardly any impact on fertility behavior in general, and neither has a consistent influence within one minority group, nor on different minority groups (Massey 1981; Bean and Tienda 1990); or its impact depends on the context (Kennedy 1973). Kennedy (1973) examines the fertility of Catholics and non-Catholics both in Ireland and in Northern Ireland, and finds higher levels for Catholics living in Northern Ireland than those living in Ireland. Kennedy concludes that "under certain conditions minority groups status may affect fertility, but it is relatively less important than other fertility determinants such as religion, rural residence, or selective migration" (Kennedy 1973, p. 90). The conditions under which a pro-natalist effect works are that the minority group is relatively large, that the minority group members believe that they can increase their political influence by increasing the number of the sub-population, that the group members are economically disadvantaged, and that there is strong social cohesion between the group members (Kennedy 1973). In the Netherlands, Van Heek (1956) traces the higher-than-average fertility among Catholics back to a history of discrimination against this minority faith.

Goldscheider and Uhlenberg (1969) find fertility rates higher among Catholics in the United States than among the white Protestant population (majority), but lower fertility levels for Jewish, black, and Japanese Americans living in Canada or the United States. They suggest for the Catholic pattern that "specific norms regarding family size and birth control must be considered. Obviously, identification with a minority group characterized by a large family-size norm and ideological prohibitions against efficient contraceptive methods raises rather than lowers fertility" (Goldscheider and Uhlenberg 1969, p. 371; see also Burch 1966 for Catholics in North America).

Massey (1981), summarizing research findings on fertility of immigrant groups to the United States that have a familistic background (such as Japanese, Chinese, Mexicans), writes that the relatively high Mexican-American fertility is rooted in an interaction between social class and cultural factors.

The findings "indicate that while traditional families do decline with time in the United States, immigrant families nonetheless retain many traditional components. At any point in time, immigrant families therefore tend to represent a composite of two cultural systems, with the mix depending on the length of time the group has been in the United States and social class" (Massey 1981, p. 64, 65).

Special fertility policies applying to minority groups have also been seen as indicator for the sub-culture hypothesis, as is the case for minorities in China

(Poston et al. 2006): After adopting the one-child policy in 1979, China issued a series of province-specific stipulations that grant most of the minority groups an exemption from the one-child policy. The authors see the differential application of the fertility policies as having the major influence on the fertility differentials between minorities and the majority in China. Poston et al. (2006) attribute this to the sub-culture hypothesis.

The second aspect of the independence hypothesis is a fertility-depressing effect that is, in general, traced back to the minority-group status *per se*. This approach centers on psychological aspects.

As one of the traits that define a minority group is the experience of discrimination, discrimination may lead to "feelings of frustration and marginality" (Bean and Tienda 1990, p. 213). The minority-group argument comes into play mainly if minority-group women of a certain educational level do not exhibit fertility levels that are similar to majority-group women of comparable education. This can be seen as discrimination resulting from minority status. Due to economic considerations, several authors see the frustration argument especially applying to women of higher education and higher socio-economic status in a minority group. It is argued that better-educated women aspire more to upward mobility than less-educated women, and upward mobility is harder to achieve among minority-group members than it is for people belonging to the majority. Hence, women who have achieved a relatively elevated socio-economic position may be less likely to risk a decline in their life conditions by having a relatively high number of children, and therefore reduce their fertility below the levels of women of a comparative socio-economic position in the majority population (Goldscheider and Uhlenberg 1969; Bean and Tienda 1990). Evidence is found in lower recent fertility levels among highly educated women who were born in Mexico, Puerto Rico, and Central/South America and live in the United States. Bean and Tienda (1990, p. 232) interpret this as follows: "This finding casts doubt on the idea that the sub-cultural hypothesis provides a general explanation of higher Spanish origin fertility, because it implies that these women reduce their fertility as childbearing costs increase, perhaps even disproportionally so, as the minority group status approach would predict."

Although the minority-status argument has been mainly raised for women of higher socio-economic status, it may be possible to extend this concept to other women: in circumstances where subjective discrimination leads to a general feeling of uncertainty and frustration, fertility disruption may be the consequence, regardless of the relative socio-economic position of a woman.

Whereas the influence of the membership in a minority group on fertility is indirect in nature, resulting from discrimination und economic uncertainty, there may also be a direct influence on fertility (Siegel 1970; Kennedy 1973; Poston et al. 2006). This influence is seen as pro-natalist due to the relatively small size of the minority group or to special societal conditions, such as policies. In general it seems, however, that a pro-natalist influence of the minority-group status can hardly be distinguished from the sub-culture hypothesis (Bean and Tienda 1990) since a minority group needs a vehicle in order to transport norms and values, such as a religious institution (Goldscheider and Uhlenberg 1969). Kennedy (1973)

emphasizes the argument of social cohesion between the group members and a coherent sub-culture (cf. Petersen 1964).

> Few minority couples, of course, would have children solely to increase the size of their group. The argument runs the other way: such minority couples would be less likely to plan rationally to have small families ... Occupational or income discrimination against a particular minority group would reduce the importance of social mobility as an antinatalist force for that group, and also lead to some couples being more likely to "let nature take its course." (Kennedy 1973, p. 86)

Roberts and Lee (1974) also suggest an independent effect of minority-group status, as found in the United States, resulting in higher fertility among minorities than among the white population. They see that:

> ... the important distinction is not so much the differences between structural and cultural factors (although such differences may indeed be important), but rather the influence of their interaction. That is, the important question becomes how the interaction of structural factors (such as occupation, income, and education) and cultural factors (norms, values, beliefs, and life styles) operates to affect fertility behavior in different ethnic populations. (Roberts and Lee 1974, p. 521, 522)

Similarly, Ritchey (1975) stresses the importance of including not only individual characteristics in the analyses, but also their relative meaning in the context, i.e., the extent of structural assimilation of the respective minority group in a population. He uses an indicator for "racial inequality of an area" for black–white fertility differentials in the United States, and finds that "... the attribute of being black – and therefore, of minority groups status – gains significance as an independent influence on fertility behavior to the extent that the social milieu maintains social distance and discriminates on the basis of this attribute" Ritchey (1975, p. 257).

Sly (1970) also refers to the degree of assimilation of certain minority groups as an important factor for the influence of an independent minority-status effect: whereas compositional differences explain fertility differentials between blacks and whites in the United States when the South is excluded from the analysis, an independent minority-group effect can be observed on blacks in the South (where social characteristics do not account for fertility differentials). He concludes that the minority hypothesis must be reformulated to minorities "which have been institutionally assimilated" (Sly 1970, p. 458).

Moreover, the fertility of minority groups "must be considered within a dynamic framework of socio-cultural change" since "these minority groups have experienced social and cultural changes of various velocities at different points in their American history" (Goldscheider and Uhlenberg 1969, p. 370). Within this dynamic context of culture, social relations, and economic conditions, "achievement values must be present for minority group members to translate the 'goals' of social mobility and concomitant acculturation for themselves and their children into 'means' which include family-size limitation" (Goldscheider and Uhlenberg 1969, p. 371). Analyzing Hispanic and black fertility in the United States, Forste and Tienda (1996) suggest that additional factors be considered, including meanings, conditions, and consequences of early childbearing; the sequencing of fertility

and marriage; as well as perceptions about the relative position of an individual in a group.

2.1.10 Synthesis: Theories

Existing studies on fertility of minority groups suffer from three major shortcomings.

First, the definition of a minority group depends on rather vague criteria. Roberts and Lee (1974, p. 505) point out that "... the most important concept is minority group status, and yet the definition and measurement of this concept represent the weakest aspect of both papers" (here: referring to Goldscheider and Uhlenberg 1969; Sly 1970). These two studies use a "variety of definitions that are sometimes based on color, sometimes on religion, sometimes on national origin" (Roberts and Lee 1974, p. 505). Yet results strongly depend on the definition of the analyzed groups. Roberts and Lee (1974) demonstrate this by using three types of categorization in order to distinguish between majority and minority populations in the United States, with the minorities categorized as non-white, minority, or Spanish surname/other white/black.

Second, the time-dynamic aspect of minority behavior is only exceptionally taken into account (Bean and Tienda 1990). Roberts and Lee (1974, p. 504) suggest that a "discussion of the assimilation of minority groups is perhaps more properly viewed in terms of generational differences" since the literature on assimilation of minority groups assumes that "succeeding generations will be more assimilated than preceding generations." Even when generational differences do not follow a straightforward and continuous trend as suggested by Gordon (1964), segmented-assimilation theory as proposed by Portes and Zhou (1993) leaves the possibility for generational differences, too. Therefore, "... a research hypothesis which relates the direction of fertility changes to acculturation is one that ideally requires cohort data for its empirical verification" (Ryder et al. 1971).

Third, as main theoretical weaknesses have been identified:

> (1) a failure to specify theoretically the mechanisms that link the group's relative or absolute economic status to fertility via proximate fertility behaviors, such as marriage, sexual activity, and contraceptive behavior; (2) a failure to explicate the conditions under which minority group status depresses fertility as opposed to resulting in higher fertility; and (3) a failure to differentiate theoretically the cultural hypothesis from the minority group status hypothesis, which makes a definitive empirical test of either virtually impossible. (Forste and Tienda 1996, p. 111, 112)

We think that the minority-status effect cannot be seen separately from the subculture hypothesis. One can neither distinguish between the direction of the effects (in general, minority status leads to lower fertility, but is also used in order to explain the opposite), nor can minority status and culture be separated from each other. We argue that the definition of a minority as a group of individuals whose members share certain characteristics and experiences implies that there needs to be

social interaction between the members in order to constitute a group behavior. Several authors emphasize the importance of social cohesion (Kennedy 1973) or a meaning-giving framework (Goldscheider and Uhlenberg 1969). Therefore, the sub-culture and the minority-status hypothesis should be treated as one factor that can lead to different outcomes, either higher or lower fertility of minorities compared to the majority population.

Besides the weaknesses, the most important question for our study is, however, what the framework of fertility of minority groups could contribute to the framework of fertility of international migrants. This is of importance since not many studies within the framework of international migrants distinguish between migrant generations. This may not be necessary in contexts where the second generation has not yet reached family-formation ages; second generations have, however, reached these ages in some contexts, as in Germany, and future research should, therefore, pay particular attention to these groups.

Comparing the theoretical frameworks of migrants and minority-group members, the similarities are (not surprisingly) striking; nevertheless, three differences do occur.

Adaptation

The migration framework centers on first-generation migrants and provides the hypothesis that first-generation immigrants adapt to the behavior of the region of destination as the length of stay increases. Using the framework on minorities, this hypothesis can be extended to the second migrant generation.

Socialization and Sub-Culture

In contrast to the adaptation hypothesis, the migration framework emphasizes a dominant influence of the socialization context on attitudes and behavior, even at later ages. Thus, first-generation immigrants may preserve fertility behavior that is different from that of the region of destination. Second-generation immigrants may, however, be mainly influenced by the region of destination (e.g., the institutional framework during childhood and adolescence), and may therefore show similarities to people at destination, but differences when compared to the first generation.

Similarly, the minority framework provides the idea of a sub-culture that pertains to a minority group and provides a context for fertility behavior that is different from that of the majority population. Therefore, fertility differentials may continue to exist for both the first immigrant generation and subsequent generations.

When comparing the socialization and the sub-culture hypotheses, there appears to be a difference in the predicted outcomes for the second generation. Whereas second-generation migrants are expected to show differences compared to the first generation, second-generation people in minority groups are hypothesized to share

similarities with the first generation. Since descendants of migrants may be socialized into a sub-culture of their parents' origin or into mainstream society or into both, the type of socialization may thus be a reason for fertility behavior and differentials. Moreover, we should note that it is difficult to distinguish clearly between fertility behavior as caused by socialization at destination and adaptive processes because both hypotheses predict similar fertility levels of persons at destination and second-generation migrants.

Disruption

The disruption hypothesis as suggested by the migration framework applies to first-generation immigrants only because it emphasizes the move itself as being stressful for a person or/and a family. However, a similar hypothesis can be found in the minority framework. The independence hypothesis takes into account the effect of negative emotions and experiences, such as discrimination, uncertainty, and frustration; and assumes a fertility-diminishing effect as a result. When the realized number of children is smaller than the actual fertility preferences of a person or group due to these negative experiences, this can be seen as fertility disruption, too. This applies to the first and subsequent immigrant generations.

Composition of Sub-Groups

Both theories, on migrants as well as on minority groups, emphasize that the socio-demographic composition of sub-groups may differ from that of the majority population. These compositional differences explain a considerable number of fertility differentials between the population segments. As compositional differences are diminished, fertility differentials may diminish as well. This is true for the first and the second generations, both of migrants and of minority-group members.

Interrelation of Events and Legitimacy

Both the hypothesis of an interrelation of events and legitimacy require a move. They do not find parallels in the minority framework.

2.2 Family-Formation Context in the Countries of Origin

The chapter continues with the contextualization of the study populations. The countries of origin of the international migrants (Turkey, the former Yugoslavia, Greece, Italy, and Spain), as well as the receiving society of West Germany, have all experienced large demographic changes since the end of the 1950s, albeit at

different speeds and with varying effects. A common feature of these developments is a substantial decline in fertility (Coale and Treadway 1986). This part of the chapter describes similarities and differences in family formation behaviors, and draws on the framework of family types.

Reher (1998) stresses the concept of path dependency, which posits that when the same influence (of modernization) meets different historical, cultural, geographical, or social realities, the outcome will be different for each context. Hence, Reher (1998) does not follow Hajnal (1965) who identified a family-system pattern that divides Eastern and Western Europe. By contrast, Reher (1998, p. 213) suggests "that the implementation of this Western family structure was not uniform" (in Eastern Europe, Szoltysek [2008] finds a greater diversification of household patterns as well). Instead, Reher (1998, 2004) identifies two basic family types in Western Europe: strong family ties in the Mediterranean area, and weak ties in Northern and Western Europe, including Germany and Austria, as well as the United States. The author uses mainly the age at leaving the parental home and the kind of support provided for the most vulnerable members of the society as indicators in assigning a family type to a region. As an explanation for this dichotomy in European family types, Reher (2004) notes that, in the past, young adults in Great Britain, Denmark, and Holland left the parental home in order to work as servants, whereas the number of servants was relatively low in Spain, Portugal, Italy, and Greece. A consequence of the late departure from the parental home is a higher age at marriage.

Another trait of strong families is social control, which is more effective in strong families than it is in weak families. Consequently, the marriage indicators are similar in the respective countries belonging to a certain type of family regime. The share of extramarital births is, for example, low in areas with strong family ties, compared to those with weak family ties. Mediterranean and German patterns differ greatly. Germany seems to follow the Northern European trends. Among the family-formation behaviors observed in Germany are delayed marriage, a rapid growth in the share of non-marital cohabitations, and an increase in the share of extramarital births (van de Kaa 2001; Reher 2004).

2.2.1 Italy and Spain

Italy and Spain belong to the group with strong family ties (Reher 2004). Although over replacement level, neither country has had very high fertility levels, and the onset of the substantial fertility decline that occurred in Western Europe in the past half-century was delayed there. In the mid-1960s, the TFR was 2.5 to 3.0 in Italy and Spain; this compares to a TFR of 2.1 to 2.5 in West Germany before 1970. The decline in Italian and Spanish fertility began slowly at the end of the 1960s, and accelerated in the late 1970s. By the end of the 1980s, the TFR in Italy seemed to level off at 1.3; the TFR in Spain, at 1.4 (cf. Delgado Perez and Livi-Bacci 1992).

Italy and Spain share four features in regional fertility development: (1) The relative decline in fertility was consistent. (2) Large fertility differentials occur between the regions; in 1989, there was a one-child difference between the regions with the highest and the lowest fertility levels. Large fertility differences by region have historical roots in pre-industrial times. Neolocal households were common in southern Italy, whereas complex, patrilocal household structures dominated in the northern part of the country. (3) Today in both countries, a "one-child league" can be observed: more than ten million Italians lived in regions with a TFR of 1.0 or less in 1989, as did 3 million people in Spain. (4) A large contribution to the decline in fertility comes from the changes in marriage behavior (Delgado Perez and Livi-Bacci 1992; Viazzo 2003).

While the age at marriage declined in Western Europe in the decades following the Second World War, a reversal of the trend started in the 1970s, though slightly later in the Mediterranean regions than in Central Europe. The age at first marriage increased between 1970 and 1989 by 1 year, to 25.1 in Italy and 24.6 in Spain (West Germany: 25.5). Not only did there appear to be a trend towards postponing a first marriage; the overall rates of first marriages declined as well. The share of unmarried women aged 25 to 29 rose from 23 to 36% in Italy between 1980 and 1989; and, in Spain, from 22 to 30% over the same time period (Delgado Perez and Livi-Bacci 1992).

Both countries share the strong connection between marriage and fertility. Despite the changes in marriage behavior and a slight increase in the proportion of children born out of wedlock, the latter rates remained at a relatively low level: 6% for Italy and 8% for Spain (Delgado Perez and Livi-Bacci 1992).

Several authors trace this development back to an increasing number of single persons who continue to live in their parents' household (Delgado Perez and Livi-Bacci 1992; Reher 2004; Rosina 2004). The amount of time that children depend on the economic support of their families and when they cannot afford an own household has been prolonged due to increasing education, a delayed entry into the labor market, and a relatively high unemployment rate, especially among young women and men (Delgado Perez and Livi-Bacci 1992). Rosina (2004) writes that the scarcity of resources leads to a high quality investment into a smaller number of children. At the same time, a substantial lack of state support for crucial life events supports this development. In Spain, for example, grandmothers help their daughters care for the daughter's child by living in the same household (Reher 2004).

Dalla Zuanna (2004) also mentions the low rates of non-marital cohabitation and of divorce as traits of the Italian family type. He sees Italian familism as a consequence of policies and poverty. Against a difficult economic background, the family is seen as a golden cage in which its members – parents as well as children – benefit from an intense emotional and material exchange. Because of this golden cage, young adults develop a delay syndrome (cf. Rosina and Fraboni 2004). Dalla Zuanna (2004) attributes this delay syndrome to the failure to develop a taste for responsibility and for making choices. He draws the connection between postponement of adult independence and the decline in fertility rates in Italy as follows (Dalla Zuanna 2004): fertility has declined because employment and

motherhood are hard to combine, having children and consumption are in competition, and the value of a child is very high (and therefore demands a high investment). Since young women do not want to fail, they do not get married in growing numbers, and therefore remain childless. Also, they have fewer higher-parity children. The share of women remaining childless at the end of their reproductive lifespan in the central and northern regions of Italy has been approaching 25%. Golini (1999, p. 250) sees "in the longer term the only-child model as typical reproductive behaviour."

2.2.2 Turkey

Reher (2004) places the strong family ties observed in the Mediterranean area between the weak ties typical of Northern and Western Europe, and the pattern of allegiances that characterize oriental and Asian regions. Similarities between the Mediterranean regions, the Balkan countries, and Turkey have historical roots. Reher (1998) cites the historical pattern among peasant families of preferring family labor to non-family labor as one of the traits common to Mediterranean cultures. At the same time, instability among families coincides with a higher degree of non-family labor. He stresses also the Muslim influence, which reached Southern Europe a few centuries ago. An overriding importance of kin alliance, especially in marriage traditions, is central to the Muslim concept of family.

Of the countries included in this study, Turkey has experienced the biggest demographic changes over the past five decades. As a country of population heterogeneity, multiplicity of cultural influences, geographic and ecological variation, and rapidly ongoing social and economic transformation, Turkey underwent three stages of demographic transition since its foundation in 1923. Previously a traditional, rural, agricultural, and patriarchal society, Turkey is becoming increasingly modern, urban, industrial, and egalitarian (Sunar and Fisek 2005). Until about 1950, death rates declined steadily, while average fertility increased to almost seven children per woman. As a result, the population of Turkey almost doubled to 24 million. In this first transition phase, high fertility was considered necessary both by the civil society (families) and the state, mainly in order to overcome labor shortages, particularly in agriculture. The second stage of the demographic transition, starting in 1955 and lasting until 1985, is characterized by a steady decline in fertility. Nevertheless, the population doubled to 51 million in 1985. This phase is also marked by a rapid urbanization process: whereas the proportion of the population that lived in urban areas was about 23% in 1955, this share was about 51% 30 years later (SIS 1996).

> Urbanization and the fertility decline were mutually reinforcing processes. As young adults moved from rural areas to urban areas they chose lower rates of reproduction. In fact, part of the motivation for moving was to lead family lives less oriented to large families and more oriented to the economic, educational, and consumption opportunities of the cities. The economic transformation that was in progress at the same time reduced the emphasis

> on family employment and increased the importance of qualifying for jobs in an urban industrial labor market. Increases in standard of living with more emphasis on bringing up healthy and educated children were also a factor. The motivation to have many children decreased, and families successfully looked for ways to regulate their fertility. (SIS 1996, p. 5)

In the midst of the second transition phase, the TFR was about five children (1970 to 1975); while at the end of this phase, in the mid-1980s, it was about 1.5 lower (Shorter and Macura 1982; SIS 1996). However, fertility levels vary greatly by region. The 67 administrative provinces can be clustered into three types. Women living in the region of Istanbul-Izmir had the lowest TFR at the end of the 1960s, at around three births per woman. A mid-level TFR was observed in the urban areas in the country, where about 4.7 children per women were born. Rural areas had the highest TFR, with levels close to seven. Although internal migrants moving from rural areas to cities caused small increases in the fertility levels of the urban areas, big fertility differences between these three settlement types remained (Shorter and Macura 1982; CoE 1982; SIS 1996).

Increasing urbanization was accompanied by increasing education of women and changes in marriage patterns. The age at first marriage increased (median: 18.8 in 1955, 20.2 in 1970), while the universality of marriage remained. The postponement of first marriage accounts for about one-fifth of the decline in fertility during the period before 1975. The number of children a woman has ever born varies not only by region, but also by education: from 4.3 for illiterates in villages, to 1.9 for women with secondary schooling (8 years of schooling) in the three biggest cities at the end of the 1960s. Around 80% of the decrease in fertility is traced back to declining marital fertility, probably due to contraception (Shorter and Macura 1982; SIS 1996; Hancioglu 1997).

The main trait of the third stage of Turkey's transition is an irreversible decline in the rate of population growth, beginning in the 1980s (SIS 1996). The TFR decreased steadily to 2.7 at the beginning of the 1990s, and to 2.2 at the beginning of the twenty-first century. The median age at first childbearing has risen continuously, to almost 23 years among the youngest marriage cohorts in 2003 (Toros 1994; Koc and Özdemir 2004).

While the education of women continued to increase (only 14% of women aged 20 to 29 left school without any degree in 2003), fertility differentials remained, or even widened, depending upon the educational attainment of the women; the TFR of women with no education or school degree was 4.2 in 1993, whereas the TFR of women with secondary or higher education was 1.7. Childbearing affects female labor-force participation. About 60% of mothers are non-employed, whereas this share is about 47% among childless women (Toros 1994; Hancioglu and Ergöcmen 2004).

Although the rural–urban gap in fertility levels seems to be narrowing, regional differences remain. Educational levels and employment rates among women are lower in the eastern regions of the country, but fertility levels are higher there compared to other regions (Toros 1994; Hancioglu and Ergöcmen 2004; Koc and Özdemir 2004).

> By 1993, the West region's TFR was below replacement level of 2.1 births per women. The East region's TFR is the highest; however, it fell by almost one-half between 1960 and 1993, and appears to be declining rapidly at present. This is all the more remarkable, since it is the high fertility members of households who stay at home in the east and form new families in the east, while lower fertility members settle in the west or other regions. From the standpoint of the national trend, the weight of the high fertility areas is declining due to out-migration and the weight of low fertility areas is rising due to in-migration. Thus, the national decline of fertility is reinforced by a process of selective internal migration and population redistribution. (SIS 1996, p. 28)

In addition, fertility differentials reflect the ethnic diversity of Turkey. The population of the Republic consists of 51 ethnic groups, with Turkish (90% of the total population) and Kurdish (9%) being the largest. The fertility rates of women of these two groups differ by almost three children: the TFR of Turks was 2.7 at the end of the twentieth century, compared with 6.2 among Kurds (Koc and Hancioglu 1999). However, despite these variations in total fertility between the ethnic groups, the first-child patterns tend to be very similar, and are almost independent of socio-demographic characteristics.

By contrast, socio-economic characteristics play a role in parity progression. Analyzing the transition to a third birth, Yavuz (2006) finds the lowest transition rate from a second to a third child for Turkish women who were employed and covered by social security before their first marriage. The highest third-birth risk is calculated for Kurdish women who could not read and who did not work with social security coverage. Marriage characteristics, such as payment of a dowry, family type, and marriage arrangement, play a different role for the third-birth fertility of the ethnic groups. Among Turkish-speaking women, the decline in third-birth rates has taken place at a relatively similar pace among both those who married in a traditional manner, or in more modern ways. In contrast, a correlation between customary marriage behavior and high fertility has persisted among Kurdish women. These results stress the importance of path dependency of fertility. Ethnic groups are not affected in the same way, or at the same time, by processes of modernization and urbanization. Therefore, these ethnic groups show differences in fertility behavior as well (Yavuz 2006).

Whereas the Turkish population has experienced a relatively rapid development towards so-called Western or modern patterns in certain parts of life, such as education and economic development, other areas of social life have remained more traditional. Up to today, a patriarchal family structure is in general supported, for example, by Islamic teaching. Close relationships between family members are highly desirable, and a marriage is seen less as a decision between two individuals, but rather as a property exchange and communication between two families. Accordingly, an extended family household consisting of three generations is seen as a cultural ideal. Most of the households might be of a nuclear structure today, but are, in fact, functionally extended, with close contact between relatives (Sunar and Fisek 2005).

> Turkey harbours elements of Eastern and Western cultural features in its social fabric. The Turkish family is a microcosm of the heterogeneity that characterizes this society, so that

> there are a number of Turkish family prototypes. While it may be safely stated that overall its features are still largely traditional, at the same time highly modern or Western features coexist with the traditional. It seems that a gradually emerging synthesis will combine those traditional practices to which the populace is strongly wedded (e.g., high interconnectedness) with new patterns that fulfil the demands of a changing world (e.g., more individual autonomy). (Sunar and Fisek 2005, p. 180)

Marriage behavior is one of the more traditional elements. Only about 2% of all Turkish women never marry. Almost all births occur within a marriage (Ergöcmen and Eryurt 2004). Yavuz (2008, p. 259) finds that "the two consecutive steps of family formation, marriage and first child, are very strongly connected events for all women in Turkey," and that "despite the intense macro level economic and social changes of the last two decades, these patterns seem to be quite stable." For the majority of women in Turkey, the first child is born after 2 years of marriage almost independently of socio-demographic characteristics. In fact, marriage and the birth of at least one child are strongly inscribed in social norms in Turkey, and voluntary childlessness is an exception (Ergöcmen and Eryurt 2004; Yavuz 2008).

Kagitcibasi (1982, p. 176) sees the perceived value of children as "the missing link, at the individual level, between two socially observed phenomena – development and fertility decline." Ataca et al. (2005) find that:

> ... deviations from traditional values reflect adaptations to new life styles and changing environmental conditions. Changes brought about by socioeconomic development, such as compulsory education and nonagricultural urban living conditions, decrease the material contributions and increase the material costs of children to their parents. Sons no longer satisfy the needs of material support and old-age security. Under these conditions, children's non-economic value becomes more important for their parents. Hence, social change influences the way children are perceived and the values attributed to them by their parents. (Ataca et al. 2005, p. 104, 105)

2.2.3 Former Yugoslavia

The former Socialist Federal Republic of Yugoslavia, as it existed from 1945 to 1991, was a country of demographic, ethnic, and religious heterogeneity that resulted from large and diverse migration flows and a diverse history. The country was, for example, shaped by Turkey and the Ottoman Empire with its Muslim influence, by the Habsburg Monarchy with its Catholic influence, and Greece with its Orthodox religious practices (CoE 1990; Mrdjen 1997). Until the end of the 1980s, the country experienced a slight growth in population that varied regionally from 0.1% per year in the province of Voivodina, to 2.1% in the province of Kosovo (CoE 1990). The Croatian War of Independence (Homeland War) from 1991 to 1995 led to a "deterioration" of the demographic situation, as well as of economic living conditions in Croatia (Mrden and Mladen 1998).

The development of the fertility figures followed a downward trend that parallels that in other European countries. The TFR fell was 2.1 in 1980 and 2.0 in 1988. The fertility rates showed significant regional variation: period fertility was about 20% below replacement level in Slovenia, Voivodina, Serbia proper, Croatia,

Bosnia, and Herzegovina; and at around replacement levels in Montenegro and Macedonia. Kosovo exhibited by far the highest fertility levels, with 4.0 at the end of the 1980s (Breznik 1980; CoE 1990; Nejasmic 1996). Differential fertility by ethnic group can be traced back mainly to economic and social factors. Other determinants that cause fertility differences between ethnic groups are socio-cultural factors, such as traditions, customs, marriage age, religion, and family planning; as well as elements that constitute an ethnic group (Breznik and Raduski 1993).

Childbearing and marriage are strongly interrelated in Yugoslavia, as well. The mean age at marriage declined until the beginning of the 1970s. Since then, it has steadily increased, largely as a consequence of the war in the 1990s. Women married for the first time, on average, at age 22 in the 1970s, at age 23 in 1990, and at age 24 in 1995 (CoE 1990; Mrden and Mladen 1998). The total first marriage rate for women was 815 per 1,000 women under age 50 (CoE 1990). The rate of extramarital births increased from 4 to 10% in 1989; more in line with the rates of Mediterranean countries than those of Central European or Balkan countries (CoE 1990; Nejasmic 1996).

Botev (1994) sees three cultural traditions present in the former Yugoslavia that continue to restrict social interactions, thus influencing marriage behavior: Western traditions among Slovenes and Croats (mainly Catholics); endemic Balkan cultural traditions among Serbs, Montenegrins, and Macedonians (in the main Orthodox); and a Middle Eastern cultural tradition among most of the Muslim population. Ethnic homogamy remained the norm until the end of the 1980s,[2] and the marriage patterns roughly followed three cultural patterns. The European pattern, as seen in Slovenia, was characterized by late marriage and a high percentage of people remaining unmarried (in Slovenia in 1962, the mean age at first marriage of women was 24.3 years, and 17% of women under age 50 were not married). The Mediterranean pattern, which is characterized by early marriage of women and late marriage of men, was prevalent in Montenegro and Kosovo (mean age at first marriage was 28 years for men and 22 years for women). Meanwhile, the traditional pattern of nearly universal early marriage dominated in the rest of the former Yugoslavia, where mean ages at first marriage were between 24.5 and 25.5 years for men, and between 21.5 and 22 years for women. The share of never-married persons varied between 1.5 and 6% (Botev 1994).

2.2.4 Greece

In terms of family relationships, Greece appears to share more similarities with countries characterized by strong family ties, such as Italy and Spain, than with the other Balkan countries (Botev 1990; Hionidou 1995; Georgas et al. 2005).

[2]Mrdjen 1997 gives shares of inter-ethnic marriages of 8.6% in 1950 and 13.5% in 1990, though there is a large geographical variation. Whereas Slovenes, Croates, and Serbes have higher intermarriage rates, intermarriage is hardly observed among people of Albanian, Macedonic, and Muslim belonging.

Birth rates in Greece have fallen since 1950, when the TFR was 2.5. Since 1981, the fertility rate has been below replacement level (1.5 in 1988). Rural–urban differences in fertility have been large, amounting to about one additional child in rural areas throughout the 1950s and 1960s. At the same time, the number of first-order births also sank, while births of third or higher order continued to decline. The age of first-time motherhood increased gradually in the 1980s, from 23.3 years at the beginning of the decade to 24.2 years in 1988. The increasing age at first-time motherhood in the 1980s can be traced back to an increase in the age at marriage. Whereas the mean age at marriage among Greek women was 22.3 years in the 1970s, the mean age had risen by almost 1 year (23.2) by 1988 (CoE 1981, 1982, 1990).

While the Balkan countries of Bulgaria, Romania, and former Yugoslavia "provide the most striking example of early and universal marriage in Europe," Greece appears to be the exception in the region (Botev 1990, p. 108). The high percentages of people postponing first marriage or remaining single that are typical of Western European countries have not yet been reached in Greece, but marriage occurs significantly later in Greece than in the other Balkan countries, and the share of celibacy is higher. In 1971, almost 26% of women aged 25 to 29 were unmarried, as were 7.2% of all women under age 50. The mean age at first marriage was more than 2 years higher than it was in other Balkan countries in the 1970s.

As in Italy and Spain, the share of non-marital births has been very low in Greece, although it increased slightly in the 1980s, to 2.1% in 1988 (CoE 1982, 1990). Marriage also supports women's withdrawal from the labor force, whereas women's employment and the transition to family formation are negatively associated (Symeonidou 1999).

2.2.5 Intermediate Conclusion

Despite differences in the pace and levels of fertility changes, the most striking similarity between these five countries is the strong association between marriage and childbearing throughout the decades. Differences occur, however. Turkey is the country where childlessness remains rare despite the overall decline in fertility (Hancioglu 1997). It is also the country where marriage remains nearly universal, and the age at first marriage in Turkey is low compared to ages seen in the former Yugoslavia (on average), Greece, Italy, and Spain.

By contrast, a substantial decline in fertility occurred in West Germany earlier than in these five countries. The period TFR fell below 2 in 1970, and had declined to less than 1.4 by 1989. The mean age at marriage rose from the lowest age in the post-war period (22.7 years in 1975) to 25.5 in 1989. Accordingly, the mean age at first birth increased to 26.7 years in 1989 (Delgado Perez and Livi-Bacci 1992). While marriage is the most important partnership type for childbearing in West Germany, the share of non-marital births is about 16%, higher than in Southern and Southeastern European countries. At about 20%, the share of childlessness is higher

in West Germany than it has been in the Mediterranean areas on average (Roloff 1997; Kreyenfeld 2001a). Section 2.4 gives more information on the factors that influence fertility of West Germans and immigrant women in West Germany.

2.3 Socio-Demographic Characteristics of "Guest Workers" and Their Descendants in Germany

The foreign population in Germany differs in its socio-demographic structure from the indigenous population. This part of the chapter provides an overview of the migrant-worker groups of Turkish, Yugoslavian, Greek, Italian, and Spanish origins – the groups our study focuses on. If information is available, the immigrant generations are distinguished in order to illustrate the differences in the composition of the sub-populations. This comparison is related to the theoretical framework and the working hypotheses of this study, as compositional differences may also lead to differential fertility.

2.3.1 Legal Status

Citizenship

Before the year 2000, German citizenship was based on descent (*ius sanguinis*). An application for naturalization was possible only after a stay of 15 years in Germany. Hence, most of the "guest workers" who arrived in the 1950s and 1960s have remained "foreigners" for a long time, or are still "foreigners." The government, consisting of SPD and Bündnis 90/Die Grünen, changed the *Staatsangehörigkeitsrecht* (right of citizenship) as of January 1, 2000. According to these rules, it is possible to apply for German citizenship after an 8-year stay. The biggest group of applicants have been Turks, representing about 44% of naturalization applications; while the share of Turks of the total foreign population in Germany is 25% (Dornis 2002).

For the first time, elements of the territorial principle *(ius soli)* have been introduced into German law: if one of the parents has had an *Aufenthaltsberechtigung* (right of residence) for longer than 8 years, or an *unbefristete Aufenthaltserlaubnis* (unlimited residence permit), a child born to foreign parents in Germany receives the German nationality. If the child also receives the citizenship of the parents, he or she has to choose one of these nationalities before his or her 23rd birthday (*Optionsmodell*) (Angenendt 2002). Children born to a foreign-German couple receive German citizenship. This applied to about 18% of all children born to foreign mothers in 1994 (Münz et al. 1997a). Until 1974, children were granted German citizenship only if the father was German. After 1974, children became

Germans if the father or the mother had held German citizenship at the childbirth. However, official birth statistics register the nationality of a newborn child by the nationality of the mother (Schwarz 1996).

The number of applications for naturalization by persons of the migrant-worker population was, and remains, relatively low. In total, Diehl (2002b) finds about 30% of German residents of Turkish origin and about 32% of those of Italian origin to be German citizens (aged between 18 and 30 years). Whereas the majority of Turks with German nationality became citizens by naturalization, most Italian Germans received German citizenship by birth because their parents have a bi-national marriage (Diehl 2002b).

Work Permit

Following the end of the recruitment policies in 1973, moving to Germany with the goal of working was no longer allowed. This rule does not apply to foreigners who come from the member states of the European Communities (EC); they are allowed to work in Germany (*Arbeitnehmerfreizügigkeit*) (Herrmann 1992b). Family members of persons from non-EU countries (formerly from non-EC countries) who come to Germany in accordance with family-reunification rules do not receive a work permit in the initial period after immigration. From 1974 onwards, family members of immigrants from non-EC countries were generally forbidden to work. This rule was later loosened for non-adult children immigrating to join their parents in Germany before 1977 (Münscher 1979). Since 2001, family members of persons with a *befristete Aufenthaltserlaubnis* (temporary residence permit) or an *Aufenthaltsbewilligung* (residence permit) have been allowed to work after a 12-month stay in Germany (Angenendt 2002).

Social Benefits

Foreigners with children receive the same amount of *Kindergeld* (child benefit) as Germans do, provided the child lives in Germany. If the child remains in the country of origin, the child benefit is smaller than the amount received by families with children living in Germany (Herrmann 1992c). The child-care benefit (*Erziehungsgeld*) is paid for 2 years. Women from EU countries (and *Grenzarbeitnehmerinnen* [female border workers] from Switzerland as well as from Poland and the Czech Republic before their membership in the EU) receive *Erziehungsgeld* even when they give birth to a child and raise it in their country of origin, provided they worked in Germany prior to the birth. By contrast, since 1986 Turkish women receive child benefits only for children born and raised in Germany (Schwarz 1996).

Unemployed foreigners are – like Germans – eligible to receive *Arbeitslosengeld* (unemployment compensation) or *Arbeitslosenhilfe* (unemployment aid, until 2004[3]). The same is true for *Sozialhilfe* (social welfare, until 2004). Foreign employees who receive a German pension are treated as Germans. It does not matter whether the pension recipient lives in Germany, in his or her country of origin, or elsewhere (Herrmann 1992c; for an overview see Eichenhofer 2000a, b).

2.3.2 Education

Concerning educational attainment, studies on immigrants in West Germany indicate levels of education among "guest workers" that are lower than those of the German population, although differences between national sub-groups occur. Meis (1993) finds that about 16% of men from Yugoslavia, about 23% of men from Greece, and more than every third Turkish man lack school-leaving qualifications (using data of the Federal Institute for Population Research). Immigrant women have had even less education: 9% of Turkish women were illiterates who never went to school, and over half of the married Turkish women in Germany were without school-leaving qualifications.

Döpp and Leib (1980) have investigated the education of Italian and Turkish "guest workers" in Stadtallendorf (a town in the federal state Hessen), who made up about 19% of the total local immigrant population in 1979. Some 33% of the men and women from Italy, as well as 31% of the men and women from Turkey, had finished a course of occupational training. Regarding school education, differences are found between Italians and Turks. Among the Italians, 49% had attended school for more than 7 years (i.e., they attended secondary school). Some 16 percent of the Italians went to school longer than 8 years, and accordingly had mid-level or higher school qualifications; in exceptional cases, they also had a post-secondary degree. Some Turks, on the other hand, had never attended school; 72% of the Turks had finished elementary school, which lasts 6 years; 11% received more than 8 years of school education (Döpp and Leib 1980).

Today, educational levels are, in general, still lower among immigrants and their children than they are among Germans. Riphahn (2003, using Microcensus data) demonstrates an educational gap between second-generation immigrants (i.e., persons born to immigrant parents in Germany) and Germans in her analysis of educational attainment, measured by current enrollment in secondary school and by highest completed degree. This educational gap remains significant even after controlling for demographic factors, indicators of immigrant assimilation, indicators for the parents' human capital, country of origin, as well as regional and yearly fixed variables, and this gap persists also over time. Deficits in educational

[3]The changes effective from January 2005 onwards are not listed here since they are not relevant for the time frame of the study.

Table 2.1 Received or aspired school-leaving certificates of immigrants – %

	Men		Women	
	Second generation	Fathers	Second generation	Mothers
None or Hauptschule	26	72	17	75
Realschule	36	14	40	14
Abitur	38	14	43	9

Missing % due to missing information
Source: Fritzsche 2000, p. 371, 373 (data of the *13th Shell Jugendstudie*)

attainment among immigrant children even seem to increase the younger the cohorts are. Distinguishing by nationality, the least successful pupils are found among Turks, followed by Italians, Spaniards, persons of former-Yugoslavian nationality, Portuguese, and Greeks (Riphahn 2003).

Whereas most of the studies find lower average educational attainment among second-generation immigrants than among Germans, there is a trend among the second generation towards attaining a higher level of education than their parents' generation, or at least receiving school-leaving qualifications (Seifert 2000). The *13th Shell Jugendstudie* (respondents aged 15 to 24) finds large differences between foreigners of the second generation and their mothers and fathers (see Table 2.1; Fritzsche 2000).

Von Below (2003) has studied the educational success of young women and men of Italian and Turkish nationalities who experienced their full school education in Germany (using the Integration Survey of the Federal Institute for Population Research). She finds that the average foreigner attains a lower school degree than the average German. Whereas these differences can be traced back to the lower educational levels of the parents of Italians, the effect for Turks cannot be explained by other control variables. Among Turks in North Rhine-Westphalia, Goldberg (2000) observes that second-generation immigrants receive a better school education than their parents' generation (however, the educational level is, on average, still lower than that of Germans).

2.3.3 Occupation

The social and occupational structure of the immigrant population is characterized by social and economic disadvantages stemming from the former "guest-worker" milieu. These disadvantages were passed on to the next generation as a form of lower social starting position. However, there are differentials. For example, the share of white-collar workers increased in the 1990s, compared to the 1980s. Correspondingly, the share of blue-collar workers fell (Bade 1994; Seifert 1997). Nevertheless, Seifert (1997, using GSOEP data) finds 60% of the immigrant-worker population performing unskilled or semi-skilled work. Women belonging to the five big "guest-worker" groups were almost exclusively employed as unskilled or semi-skilled workers in 1984. In the period up to 1993, the dominance of the

blue-collar professionals decreased; however two-thirds of female employees of foreign origin had held an unskilled or semi-skilled position at the same time.

For the second immigrant generation, who attended school in Germany, the data shows an increase in the number of persons employed in public administration and social services. Nevertheless, manufacturing was the most important job sector for the second generation in the 1980s and 1990s. Accordingly, income is, on average, lower for foreigners as a group than it is for Germans (Seifert 1997).

A trend to a differentiated social structure is visible among the immigrant population. In the Turkish sub-group, the small upper class and the growing middle class consist of persons who are first- or second-generation immigrants, and who worked as skilled workers. Their children or grandchildren attended a secondary school. Persons stemming from the worker population who had little or no school education or occupational training, and who had therefore held job positions as unskilled workers, belong to the lower class (Bade 1994).

Differentials regarding education and occupation among the second immigrant generation appear to be based on the countries of origin. For example, while barely 8% of Spanish migrant workers were classified as qualified laborers by the German Federal Institute of Labor, almost 70% of their male children have a job as a skilled worker, master craftsman, or employee. By contrast, 31% of Turkish workers were hired as qualified workers, but only 28% of the men of their children's generation find a job in the categories mentioned (Thränhardt 1999). Thränhardt (1999) traces those ethnic differences back to differences in the educational politics of the various German federal states, regional segregation of the ethnic groups, and differences regarding the self-organization of the ethnic communities.

Although workers with higher levels of education also came to Germany as a result of the former recruitment campaigns, and although the educational levels among second-generation immigrants are increasing, the majority of immigrants have either no school-leaving qualification at all, or a low-level certificate (see Table 2.2). Employed German men typically complete *Hauptschule* or *Realschule,* and pass a vocational training course afterwards. This applied to about 63% of German men in 1980, and to 65% in 1996. The educational levels of persons from "guest-worker" countries differ greatly from those of Germans. Although the share of persons with a graded school certificate increased during the 1980s and 1990s, the share of persons without any school-leaving qualification was still high, representing roughly a fifth of the adults in respective country groups in 1996. The share of men who completed *Hauptschule* or *Realschule* and passed a vocational training was only up to 40% among migrants (Bender and Seifert 2000).

Accordingly up to three-fourths of immigrant men held a position as an unskilled or trained worker in 1980. However, in the following years, the share of unskilled and trained workers decreased among both women and men, whereas the share of *Facharbeiter* (skilled workers) and people holding white-collar jobs increased (see Table 2.3). This development took place to a different degree for the various nationalities, though. The distribution by work sector shows higher shares of qualified jobs for persons from the former Yugoslavia. This reflects the, by that time,

Table 2.2 Educational degrees of persons employed in Germany with social security by sex and nationality, 1980 and 1996 – %

	No school education		*Hauptschule/ Realschule* Without vocational training		*Hauptschule/ Realschule* With vocational training		Abitur	
Nationality	Men	Women	Men	Women	Men	Women	Men	Women
1980								
German	5	6	25	38	63	53	7	4
Turkish	20	20	64	74	15	5	1	1
Yugoslavian	15	14	41	71	42	14	1	1
Italian	15	14	61	75	23	10	1	1
Greek	14	17	64	75	18	7	3	1
Spanish	15	14	59	73	24	12	2	1
1996								
German	6	8	15	19	65	63	14	10
Turkish	17	20	56	58	25	21	2	2
Yugoslavian	19	18	41	54	38	26	2	3
Italian	19	18	47	51	32	27	2	4
Greek	20	19	52	58	24	19	4	4
Spanish	12	14	42	44	40	34	6	8

Source: Bender and Seifert 2000, p. 62, 65 (data of the *Beschäftigtenstatistik*)

Table 2.3 Labor-market status by sex and nationality, Germany 1980 and 1996 – %

	Unskilled/trained workers		Skilled workers (*Facharbeiter*)		White collar	
Nationality	Men	Women	Men	Women	Men	Women
1980						
German	24	26	41	8	34	66
Turkish	76	91	22	5	2	4
Yugoslavian	50	83	46	7	3	9
Italian	72	86	25	7	4	8
Greek	74	89	21	6	5	5
Spanish	65	83	30	7	5	10
1996						
German	22	16	37	7	41	77
Turkish	70	71	25	7	5	22
Yugoslavian	56	66	38	8	6	26
Italian	61	61	30	10	9	29
Greek	70	74	21	6	9	19
Spanish	49	49	35	8	16	43

Source: Bender and Seifert 2000, p. 70 (data of the *Beschäftigtenstatistik*)

growing number of refugees who had higher qualifications than persons from the traditional "guest-worker" period (Bender and Seifert 2000).

Persons of Italian, Spanish, Greek, Turkish, or former-Yugoslavian citizenship "are initially less able than natives to translate their human capital into occupational status within the German labor market," find Constant and Massey (2005, p. 502) using data of the GSOEP. Immigrants are channeled into first occupations of

Table 2.4 Unemployment rates of foreigners in Germany by country of origin – %

	1980	1985	1990	1995	1996
Turkey	5.9	14.6	10.3	18.9	21.8
Yugoslavia	2.6	10.0	6.3	9.2	9.9
Greece	3.8	11.5	10.0	15.7	17.4
Italy	4.8	14.3	11.0	15.9	17.4
Spain	3.0	8.8	7.2	10.7	11.5

Source: Bender and Seifert 2000, p. 79 (data of the Bundesanstalt für Arbeit)

significantly lower status than persons of the German population. The authors assume that immigrants take on jobs of very low status when they arrive and – for a relatively long time span – remain in these jobs. The prestige of the first job determines the subsequent upward mobility, which is one of the reasons why Germans do better in the subsequent occupations, whereas immigrants are also less likely to turn their human capital into job positions of higher prestige. However, when controlling for the occupational status, less evidence for the earning disadvantages of immigrants is found (Constant and Massey 2005).

While unemployment did not exist during the recruitment phase and unemployed "guest workers" largely left West Germany in the 1970s, the number of foreigners without work increased in the 1980s, and has been higher than among Germans ever since (almost 20%). The unemployment rates vary by country background. The highest share of unemployed persons is observed for Turks, with more than 20%, while Yugoslavians have the lowest unemployment rates among the five nationalities considered in our study (10%; data from 1996; Bender and Seifert 2000; see Table 2.4).

2.3.4 Religious Affiliation

Investigating the religious affiliation of "guest workers," Kane (1986) uses official statistics from 1961 to 1981. According to these data, more than 90% of the immigrants from Italy and Spain had a Catholic affiliation, about 95% of Turks had a Muslim affiliation, and 95% of Greeks belonged to the Greek Orthodox Church (c.f. Kane and Stephen 1988).

Religion plays an important role in father-son relations in Turkish families, whereas religion is the domain of women among Greeks and Italians (BMFSFJ 2000). For second-generation Turks, Meng (without year, p. 28) observes that Islamic fundamentalism, in particular, can serve as an "identity anchor." He finds that young women of Turkish origin in Germany see themselves as confronted with role guidelines in the family and in society that are partly in opposition to each other. Growing up in patriarchal family structures has not enabled young women to develop competencies such as empathy, role distance, and tolerance of ambiguities, for example. The re-orientation to Islam may help to overcome the patriarchal claims (Meng [without year]).

However, a stronger orientation towards religion cannot be found among younger immigrants in general. The younger the respondents are, the less frequently they attend religious services (Diehl et al. 1998, using GSOEP data). Asked how important religion is for general satisfaction with their own lives, the majority of Turks said they regard religion as "important" or "very important" (about 34% and about 43%), whereas religion did not play such an important role for the Germans surveyed (33% and 11%). However, the relatively high importance of religion is not only a typically Islamic phenomenon. For Italians, Spaniards, Greeks, and persons from the former Yugoslavia, the respective religion does have a relatively high impact on the level of contentment. On other hand, the frequency of attendance at religious ceremonies is similar for these foreign groups and Germans (Diehl et al. 1998).

2.3.5 Social Interaction and Marriage Behavior

A persistence or change of norms, attitudes, and behaviors depends, among other things, on social interaction (Bernardi 2003). Only a small share of persons of the "guest-worker" groups maintains closer contact with West Germans, such as visits or help with problems (Bonacker and Häufele 1986). Haug (2003) investigates the social integration of Italian and Turkish immigrants aged 18 to 30 years, looking at social networks (using the Integration Survey of the Federal Institute for Population Research). She finds differences by sex: compared with foreign men, foreign women have a smaller number of friends, less frequently have a multicultural network of friends, and more often maintain contacts with persons of the same nationality and ethnic group. Distinguishing between the immigrant generations, she finds more contacts to Germans among second-generation migrants (here defined as persons who were born in Germany or who immigrated before school age) than among the first generation. The reason for this difference is seen in the inter-generational differences in school education (Haug 2003).

Regarding union formation, differences appear between both immigrant women and men, as well as between the immigrant generations. At the beginning of the recruitment drives, for example, more than 80% of male Turkish migrant workers were married when they went to West Germany. However, only a fraction of them initially lived in Germany with their spouses (Abadan-Unat 1974). The wives joined the husband later on. In recent years, the character of immigration to Germany has shifted to unmarried persons who marry after their move. The number of weddings that take place in Germany – whether in a German *Standesamt* or in a Turkish consulate – has been growing in recent years (BMFSFJ 2000). As is typical for immigrant groups, men are more likely to marry a woman from the population at destination than immigrant women are likely to marry a German man in general. The rates of mixed marriages are higher

among the second generation than among the first generation, though. The likelihood of a mixed marriage increases when the immigrant has a higher education. In general, immigrants show a preference for homogamy – related to religious affiliation as well as to country background – since this seems to reduce the potential for conflicts between the partners. The more balanced the sex ratio within a national sub-group is, the greater are the chances this homogamy preference will be realized; and this pattern seems to be independent of the total size of the respective sub-populations. The degree of social interaction with Germans and homogeneity of the marriage are interrelated: homogeneous immigrant couples maintain a social network mainly in their own ethnic group (Weidacher 2000; Milewski-Nykiel 2002; Milewski 2003; Straßburger 2003; González-Ferrer 2006).

Straßburger (2003) stresses the importance of a kin alliance in the process of partner selection and marriage for second-generation Turks in Germany. Children of immigrant parents are often expected to marry a person of the kin network in the country of origin in order to bring this person to Germany as well. However, another reason for marrying a related person is the shared attitudes and intentions regarding family networks, which a German partner may not share with a person of the immigrated Turkish population (Straßburger 2003).

Further factors that are thought to influence the rate of mixed marriages are knowledge of the German language, naturalization, and duration of stay in Germany. Among the national sub-groups considered in our study, women from the former Yugoslavia and Spain had the highest rates of mixed marriages with Germans: in 1980, three out of 100 single women married a man of a German nationality. For men, the highest rates of mixed marriage are found for Italians; about 6% of them married a German woman (Kane and Stephen 1988). Even lower are the rates of mixed marriages between immigrants in Germany and other immigrants stemming from a third country. This is most often traced back to language barriers and cultural differences, mainly different religious affiliations of people belonging to the respective immigrant groups (Mimkes 2001; Vetter 2001; Milewski-Nykiel 2002; Milewski 2003).

The share of persons who are married is higher among the immigrants living in Germany than among the Germans, and the foreigners' age at first marriage is about 2 years lower on average than that of the Germans (Roloff 1998). Among the immigrant groups under consideration here, men and women of Turkish origin have the highest proportion married (95%) and the youngest ages at first marriage (Schwarz 1980). The relatively young age at marriage correlates with relatively low educational attainment, but also with direct marriages. The absence of premarital cohabitation is more frequently observed among the immigrant generations than among Germans (Milewski 2003).

As concerns childbearing, marriage is the main type of union in West Germany for the transition to parenthood both for migrants and Germans, although the share of non-marital births is higher among Germans (Carlson 1985b; BMFSFJ 2000).

2.4 Research Summary: Fertility of "Guest Workers" in Germany

The relative scarcity of studies on family behaviors of immigrants in West Germany, as mentioned in the introduction, can be partly attributed to the fact that the childbearing phase of "guest workers" (and other immigrants) started before they moved to Germany, and partly because "guest workers" were supposed to stay only temporarily in West Germany. The dearth of studies can also be related to a problem that has been known to affect research on fertility in Germany in general: the shortage of data that allows for precise analysis. The German Microcensus, for example, the largest dataset available, does not contain a question about the biological number of children, but asks only about the children that live in the respondent's household (Kreyenfeld 2004). Estimations based on this dataset may therefore underestimate the number of children a woman has had if a child has left the parental home already. In the immigration context, this means that children staying in the country of origin are not included in the dataset. Hence, neither the total of number of children, nor the parity of the respective subsequent birth(s) may be correctly calculated.

In previous decades, immigrants were also included in larger social surveys and became the subject of special surveys in family sociology (cf. Nauck 2007). The datasets, albeit much smaller in size than the Microcensus, may provide sufficient information on birth histories in general, but typically lack information about the migration history of the respondent. Other datasets that researchers have used in order to study the fertility of immigrants have been designed for different topics. Since they do not center on information about children, the birth histories are normally not complete, or the respondents are too young at the interview to allow us to draw reliable conclusions about much of their fertility behavior.

Hence, the studies on the topic carried out so far cannot present anything near a complete picture of the fertility of immigrants living in Germany. They each deliver pieces, either focusing on a specific group of origin (mostly Turks), or on an aspect such as segregation. In this part of the chapter, we provide an overview of the studies that have been carried out so far, the datasets and methods used, as well as the results in more detail, and a discussion in the light of the theories introduced in Part 2.1 of our paper.

2.4.1 Period, Age, and Time Effects

Calendar Year

The fertility of women from the five "guest-worker" countries that are under consideration for our study, as well as of West German women, declined in recent decades. This is also true for the non-emigrated women in the respective countries of origin; they have shown decreasing birth rates since the 1970s. The fertility patterns

Table 2.5 Total fertility rate in selected countries of origin and in Germany

	Immigrants in Germany						Women in country of origin			
	1975	1980	1985	1987	1990	1993	1975	1985	1990	1993
West Germans							1.3	1.3	1.4	1.3
Turks	4.3	3.6	2.4	2.9	3.0	2.5	5.1	4.1	3.0	2.8
Greeks	2.8	1.8	1.2	1.2	1.2	1.2	2.3	1.7	1.4	1.4
Italians	2.3	2.0	1.5	1.6	1.5	1.3	2.2	1.5	1.4	1.3
Spaniards	2.0	1.7	1.2	1.3	0.7	0.6	2.8	1.8	1.3	1.2
Yugoslavians	2.2	2.0					2.3	2.1		

Source: Nauck (1997, p. 164); TFR for Yugoslavians according to Kane (1989)

of immigrant women from different countries of origin in West Germany show differences, however. In the year 1993, for example, the total fertility rate of Turkish women was almost twice as high as the West Germans' rate, whereas Spaniards had only half as many children as West Germans did (Nauck 1997; see Table 2.5).

On the one hand, Schwarz (1996) relates the development of the birth numbers of foreign women in Germany to the general economic situation in Germany and to the welfare-state framework. The low birth rates in 1985, visible in particular for Turks, could be partly the result of return migration due to the worsening situation on the labor market in West Germany and rewards for return migrants. On the other hand, since 1986, families from non-EU countries receive child care benefits only for children who were born and raised in Germany. This is mainly important for Turks, and is probably the cause for the increasing birth numbers among Turks in much of that time period (Schwarz 1996).

However, one has to be careful with conclusions here. The TFR takes into account only the births that were given after the move to Germany. Hence, conclusions cannot be reached about the total number of children of a woman. Also, some numbers seem rather awkward, such as the TFR of 0.6 of Spanish women in West Germany. Several authors relate this to a low share of married women from Spain in Germany (cf. Schwarz 1996). It may well be, however, that there are more causes behind this number. International migrants may deliver their child in the home country, for example. In such a case, the birth would not show up in the German birth registers. Another potential cause for an underestimation of the TFR could be an overestimation of the number of immigrants living in Germany. As in any other country, statistics on return migration tend to underestimate the real numbers. In addition, a naturalization of the mother may hide the immigration background, and therefore also lead to an underestimation of fertility based on immigrants who have not been naturalized. Due to the different causes of systematic underestimation of the fertility of immigrants, Germany's Federal Statistical Office has discontinued the calculation of immigrant-fertility figures (cf. Schwarz 1996; Nauck 2007).

Age

Women from the five countries of origin share a relatively young age at childbearing compared to West Germans. In the second half of the 1970s, for example, the

Table 2.6 Unadjusted age-specific fertility rates for "guest-worker" groups and West Germans, 1980 – per 1,000

	Turks	Yugoslavians	Greeks	Italians	Spaniards	West Germans
15–19	80.1	43.3	44.3	43.8	14.1	13.2
20–24	235.8	137.6	127.3	136.5	90.0	77.3
25–29	176.8	88.1	86.0	105.5	82.5	105.1
30–34	119.2	49.7	46.6	63.9	56.5	63.1
35–39	67.8	21.9	24.7	30.8	26.5	16.4
40–44	27.7	7.4	5.8	9.3	9.0	3.5
45–49	6.4	0.3	0.3	0.9	0.4	0.3

Source: Kane (1989, p. 187)

peak of childbearing was between ages 20 and 24 for immigrant women, but around ages 27 and 28 for West Germans (Kane 1986, 1989; see Table 2.6). Kane analyzes marital and non-marital fertility trends for five "guest-worker" populations from 1961 to 1981, and compares them for the first time to those of West Germans and of women in the respective countries of origin. He studies Greeks, Italians, Spaniards, Turks, and Yugoslavians using population and fertility data from the 1961 and 1970 West German national population censuses, from the annual microcensuses, and from population registration systems. The age-specific rates are quite similar for women in the countries of origin and immigrant women in West Germany (Kane 1989).

Duration of Stay

Using individual birth-history data, Mayer and Riphahn (2000) study the fertility of women of the same five "guest-worker" nationalities from the 1996 wave of the German Socio-Economic Panel. They analyze women aged 40 and older (375 foreigners, 1,718 Germans), and use the completed fertility in order to study the effect of the number of fertile years an immigrant woman spent in Germany on her final number of children (Mayer and Riphahn 2000). This analysis reveals period effects in the fertility of immigrants: those who arrived in the 1970s have a higher number of children than the immigrant cohorts who arrived prior to or after them.

On the one hand, the results confirm the socialization hypothesis: immigrant women from these five countries have higher levels of completed fertility than West Germans: Turks, 3.8; Italians, 2.8; Spaniards, 2.5; Greeks and Yugoslavians, 2.3; compared to 1.9 among Germans. On the other hand, they prove adaptive behavior: immigrants who spent their whole fertile period abroad have on average 3.8 children, those who spent one or 5 fertile years in Germany have an average of 3.2 children, and those who spent almost their entire fertile life span in the country of destination have an average of 2.3 children. While immigrants still tend to have higher numbers of children than West Germans, those who immigrate before their 28th birthday (meaning they spent more than 13 fertile years in Germany) have a smaller number of children than those who immigrate at a later age (Mayer and Riphahn 2000).

2.4.2 Individual Factors Influencing Fertility

As we have seen, the socio-demographic structure of the "guest-worker" population is different from that of the German population in West Germany. Fertility differentials between the majority and the immigrant population(s) may therefore be due to compositional differences. These fertility differentials may be reduced or disappear altogether when it is controlled for compositional differences in the analysis. The trait that is used most often in order to explain fertility differentials between immigrants and West Germans is marital status.

Marital Status

Marriage is the most important factor for childbirth, both for West Germans and for immigrants (Carlson 1985b; cf. Schwarz 1996; Weidacher 2000). Kane (1989) traces the overall fertility decline among immigrants from 1975 to 1980 back to a decrease in marital fertility for all immigrant groups, whereas the proportion of married persons in these groups did not decline much in this time span. By 1980, the immigrant groups originating from Turky, Yugoslavia, Greece, Italy, and Spain showed a convergence in marital fertility. The share of married couples with at least one child was similar for couples with a German and a foreign husband: around 85% in the 1980s and in the 1990s (Kane 1989; Schwarz 1996).

The share of non-marital births among the total number of births of immigrant women living in West Germany reaches levels similar to those of West Germans (about 12% at the beginning of the 1980s), and is much higher compared to the respective levels in the countries of origin. Carlson (1985b) relates the differences in the shares of non-marital births between immigrants in Germany and women in the respective countries of origin to an "overarching structure of social pressure and possibilities," which defines normative bounds of marriage and childbearing. As the social environment changes, fertility behavior changes, too (Carlson 1985b, p. 111).

Among Turkish immigrant women, only 2% remained childless. Schwarz (1980) explains this with the marriage behavior of Turks: almost none of the Turkish women aged 25 years and above and living in Germany was unmarried, and almost all of the married Turkish women in Germany lived together with their husbands (16% of Turkish men in Germany were married, but their spouses were still living in Turkey) (Schwarz 1980).

In a more recent paper, Haug (2002) studies mate selection and fertility of persons aged 18 to 30 years of German, Italian, and Turkish descent. Immigrants, as well as their children, are among the persons studied. She uses data of the Integration Survey carried out by the Federal Institute for Population Research in 1999.

Due to the age structure of the respondents, only 23% of the people surveyed had become parents; from about 18% among Germans to 31% among Turks.

Lone parenthood was rare among all three groups. A child-oriented marriage pattern was instead found to be common. Thus, having a child correlates less with a stable partnership, but more with marital status. The desire for having their own children was found to be highest among Turkish and Italian women and men (90%); by contrast, just 70% of Germans indicated they want to have a child. The logistic-regression analysis of having children reveals the marital status as the variable with the highest impact. Married persons were shown to be 22 times more likely to have at least one child compared with unmarried persons. Therefore, Haug (2002) concludes that young Turkish women still follow traditional family patterns. They are characterized by early marriage, a low frequency of childless persons, and larger family sizes on average.

Educational Attainment and Employment

As far as further determinants of fertility are concerned, the few studies carried out so far show that the behavior of immigrants and West Germans is affected in a similar manner. This applies mainly to educational attainment. Studies on the effect of education on fertility of Germans show that fertility declines as a woman's educational level increases (cf. Huinink 2006). The analysis by Mayer and Riphahn (2000) on "guest workers" shows a similar fertility-declining effect of a higher education: every additional year of schooling decreases the number of children by about 4%. The impact of the type of school degree is not of statistical significance; however, women with a vocational degree have lower birth numbers than others. The only exception are persons with an apprenticeship, who have on average fewer children than those with an advanced degree. Haug (2002) arrives at similar results: the likelihood of having children decreased with higher education, completed vocational training, and enrollment in education (both for women and men).

Hennig and Kohlmann (1999) analyze the number of children living in the households of Turkish, Italian, and Yugoslavian persons using data of the 1991 German Microcensus and applying Poisson regression techniques (in a country comparison to the same immigrant groups in the United States). They pay special attention to factors that can be related to the micro-economic theory of fertility behavior, and find that immigrants are affected in a similar way as West Germans: higher education, full-time employment, and higher income among women reduce the number of children in the household. The authors therefore conclude that "economic factors always play an important role in fertility decisions, regardless of place of birth or country of residence," whereas sub-cultural norms and a disruptive effect of the migration process appear to have a relatively small influence on immigrants living in West Germany (Hennig and Kohlmann 1999, p. 54). In general, it has been shown for Germany, as well as for other Western European countries, that gainfully employed women have lower transition rates to births than women out of the workforce (Kreyenfeld 2001a; Huinink 2006).

Religion

Regarding the religious affiliation, Mayer and Riphahn's study (2000) finds that women who do not have any religious affiliation generally have lower fertility than women who are religious, but the authors find different effects for "guest workers" and Germans: whereas German Catholics and Protestants have higher completed fertility than women of other Christian faiths or no confession, being Catholic or Protestant decreases the number of children among immigrants; while belonging to another religious affiliation, mainly Muslim, increases the birth numbers, but not in a significant manner (Mayer and Riphahn 2000). Similarly, Haug (2002) concludes that Muslim religion does not have a direct impact on fertility behavior, but influences fertility indirectly by providing marriage norms.

2.4.3 Contextual and Cultural Factors

Another feature that has received attention is of geographical nature: the rural or urban origin of the immigrants and the degree of residential segregation at destination.[4] In Kane's study (1986, 1989), the standardization for the area of origin proves regional selectivity as one of the factors affecting immigrant fertility for Italians and Turks: about 80% of the immigrants from Italy come from the southern part of the country and Sicily, where fertility was above the Italian average. Controlling for regional composition reveals a 4% lower fertility rate among Italian immigrants in Germany, compared to fertility levels in their home country (Italian migrant fertility was in total, however, 15 to 20% higher than that of the Italian population). By contrast, a disproportional number of immigrants from Turkey came from the western and central regions of the country. The fertility of women in those parts of Turkey is lower than that of the national average. Again, controlling for regional composition reduces the fertility differentials of Turkish migrants from 18% lower to 3% lower, compared to women in the country of origin (Kane 1986).

The correlation between segregation and fertility has been demonstrated by Nauck (1987); however, he interprets selection effects as self-chosen segregation rather than as the cause of segregation. He focuses on the fertility of Turkish immigrants in Germany, using individual-level data of 520 immigrant families (these retrospective interviews were conducted within the project on "*Sozialisation und Interaktion in Familien türkischer Arbeitsemigranten*" in 1984). The sample contains both women and men of Turkish nationality who were married to a Turkish partner, had at least one child, and shared a household in Germany. The mothers in the sample were 37.4 years old on average; the fathers, 41.9 years old. The author uses this relatively high age at the time of the interview as an indicator

[4]For West Germans, Strohmeier (1989), for example, shows rural–urban fertility differentials and selected moves to rural areas among women with higher fertility.

for stability of the analysis, since a high share of the families had reached the final number of children. However, the analysis excludes persons who were unmarried and/or childless, lived separately from their spouses, and couples of mixed nationality; and might, therefore, fail to give a representative picture of the Turkish population in Germany (Nauck 1987).

Nauck's research question is whether the living conditions in the country of origin are more important than those in the country of destination; in Germany, mainly the level of ethnic segregation in the living area and in the residential building. The dependent variables are the average number of children living in the household, born in Turkey, and the number born in Germany. A classification analysis shows that the degree of segregation correlates only with the number of children living in a household, but not with the total number of children of Turkish families. Therefore, the number of children living in a household is only supposed to be an indicator for different family-reunification behaviors by living areas. Also, the level of segregation of the living area does not influence the total number of children a Turkish family has (Nauck 1987).

Correlation and regression analyses reveal the higher influence of contextual and individual determinants of the country of origin on the number of children, compared to the circumstances in the country of destination: the higher the degrees of urbanization and of modernization of the area of origin are, the lower is the number of children, both of those born in Turkey, as well as the total number of children. However, the higher the degree of urbanization of a woman's area of origin is and the higher her number of children born in Turkey is, the higher is the number of children born in Germany. According to Nauck (1987), this results from the emigration behavior of women: women from more urbanized and modernized areas emigrate in earlier phases of their lives, compared to those from rural and less modernized areas, and they therefore have smaller numbers of children in the country of destination.

On the individual level, Nauck (1987) sees the following factors as influencing the number of children: the higher the religious bonds and the stronger the normative gender-role orientations are, the higher is the number of children. By contrast, the higher the level of education is, the better the knowledge of the German language is, and the higher the family income is; the smaller is the number of children among Turkish families in Germany. These factors are correlated. The variable "urbanization of the area of origin" has the most explanatory power since it determines the socio-structural position in the society of origin; for example, in terms of educational chances, religious practices, family living style, and the value associated with children. The second important variable is the educational attainment of the woman: the higher it is, the higher is the likelihood that a woman has left the network of the normative family context before her emigration. Higher education is related to lower fertility in Turkey as well as in Germany.

The number of children born in Turkey influences the fertility behavior of immigrant women in Germany to a high degree. For example, children reduce the opportunities for learning the language of the host society and strengthen the religious bonds, both of which hinder assimilation processes. At the same time,

the benefits expected from parents with utilitarian expectations towards their children are lowered in the country of destination because of higher costs of children and the costs of the immigration itself. Therefore, immigrant couples adjust their fertility behavior to the situational changes, but not due to normative changes. The process of modernization influences the type of value placed on children, but Nauck also expresses doubt that childlessness will become a highly regarded alternative among Turkish immigrants in Germany. The reduction of births by adapting to German circumstances applies mainly to higher parities (Nauck 1987).

Vaskovics (1987) investigates the association between the fertility of foreign women and the level of segregation of their living area. About 40% of foreign women live in blocks where the share of foreigners is about 30%. He finds that the number of children increases with an increasing level of segregation, and attributes that to the tradition of cultural norms and gender-role orientations of the respective countries of origin.

As indicated by Nauck (1987), knowledge of the German language correlates with the degree of adaptation of immigrants to Germany. Kane (1986) shows that an increase in self-evaluated language proficiency leads to a decrease in the average number of children a Turkish woman has. Turkish women aged 25 to 39 with a good command of German were at most a third likely to have four or more children than immigrant women from the same country of origin with little knowledge of the German language. The direction of this relationship may, however, work in both ways since migrant women with many children are more likely to be housewives and therefore to live at home, separated from German society (Kane 1986).

Most of the studies find the general trend that immigrant women of the first generation have a number of children that is, on average, lower than that of the respective country of origin and higher than that of West Germans. Von Delhaes-Günther (1977), for example, compares the average number of children of female and male immigrants from southern Italy in North Rhine-Westphalia to the number of children of their parents and their siblings that remained in their home region. He finds that the number of children is lower among the children's generation compared to their parents', but that the emigrants to Germany have the smallest number of children, with 1.9 on average. Meanwhile, their brothers and sisters in Italy have 2.6 and their parents 4.9 children. The author sees his findings as illustrating a rather rapid adaptation to the fertility patterns of an industrialized country (von Delhaes-Günther 1977).

2.4.4 Reflections in the Light of Theory

The review of the literature on international findings as well as on studies on West Germany shows that five main hypotheses are posited as possible explanations for fertility differentials between migrants and other persons at destination. Per se, investigation of most of these hypotheses requires obtaining information about the

sequencing of events (migration, births, marriage); i.e., accessing longitudinal data. In practice, however, there appears a lack of this kind of data. Hence, hypotheses can hardly be proven, or studies may arrive at contradictory conclusions.

In West Germany, the crude birth numbers of migrant-worker populations reflect the history of "guest workers." During the first "guest-worker" phase in the 1960s, when mainly male "guest workers" entered Germany, the birth numbers of foreigners were relatively low. In the 1970s, a period characterized by family reunions, the number of foreign births increased. This is reflected by aggregate measures (Linke 1976; Kane 1986; BMFSFJ 2000) as well as by data on the individual level (Mayer and Riphahn 2000). Since the 1980s, the number of births by "guest workers" and their descendants in Germany has declined somewhat.

Socialization

In general, the summary measures seem to support the hypotheses of socialization and of adaptation. The TFR of immigrant women in West Germany lies between the fertility rates of the respective countries of origin and of West Germany or close to the TFR of West Germans. At the same time, immigrants from the different countries show fertility differentials, as they can also be observed between these countries of origin, i.e., higher TFR can be seen for Turks than for women from the Southern and Southeastern European countries. However, for the aforementioned reasons, one has to be careful in drawing conclusions.

Besides methodological problems, the findings on fertility of "guest workers" in West Germany are in line with international studies. In general, the family-formation behaviors of emigrant women from the Mediterranean area seem to resemble the behaviors common in their countries of origin. Khoo et al. (2002) find that the fertility levels of women born in Italy, Greece, and the former Yugoslavia dropped in Australia as well when fertility fell in those countries of origin. Women from Turkey had higher fertility levels than women from the Southern and Southeastern European countries and women born in Australia over the past 30 years. The similarities between family-formation patterns are also apparent in the low shares of non-marital cohabitation, divorces, and ex-nuptial births among women from Mediterranean countries in Australia. Also, young women tend to leave the parental household only for marriage. Therefore, the age at first marriage is relatively low (Khoo et al. 2002). In another country of destination, Belgium, particularly low fertility rates among women from Italy were also calculated (Perrin et al. 2002).

For West Germany, Kane (1986) finds that:

> ... Turkish and Italian migrant fertility during the 1970s still closely resembled the fertility levels and patterns in the regions of the home country from which they migrated. Because of the much higher levels of Turkish marital fertility and the more culturally and socially isolated circumstances of Turkish migrants, it seems unlikely that Turkish fertility in Germany will converge with that of native Germans in the next decade. (Kane 1986, p. 123)

Although international migration is associated with a shrinking of the family-formation process, immigrants from Turkey in West Germany have maintained

family characteristics that are similar to women in Turkey. Childlessness remains an exception among immigrants from Turkey in Germany as in Turkey, and non-marriage also remains rare (Nauck 1997).

Most of the studies so far have focused on first-generation immigrants, or do not distinguish between the first and second generations. As an exception, Hennig and Kohlmann (1999) use an indicator if a person moved to Germany as an adult or during childhood or adolescence, but exclude immigrant children who were born in West Germany. Haug (2002) does not distinguish between the generations, either. In the latter study, the respondents are relatively young. Therefore, a large share of the sample may have spent at least a part of childhood and adolescence in Germany. It seems that young immigrants from Turkey, Greece, and Italy in Germany start family formation earlier and have a bigger family size than West Germans do. Both fertility preferences and actual behavior of second-generation immigrants in Germany seem to indicate a sub-cultural behavior on one hand. On the other, they point at the West German living context as shaping fertility behavior of immigrants.

Adaptation

As far as the adaptation hypothesis is concerned, the duration of stay at destination needs to be considered. For West Germany, Mayer and Riphahn (2000) find support for the theory of assimilation (adaptation) by taking into account the number of fertile years spent in Germany, which is seen as contradicting the disruption assumption. The influence of the socialization is reduced the earlier in life a woman emigrated, and the more fertile years she spent in the German context. Hennig and Kohlmann (1999) also support the adaptation hypothesis since they find that economic factors have a higher influence on fertility than sub-cultural factors. None of the studies, however, takes into account whether the children were born prior to or after the move, and they investigate only the number of children of women aged 40 and older. Therefore, they cannot answer the question about the impact of the migration itself on subsequent childbearing.

On the contrary, one may rather argue that this kind of analysis says more about the selection of migrants according to their number of children prior to the migration since the likelihood of international migration decreases the more children a family (woman) has (Kane 1989). Nauck (1987), however, sees support for the adaptation theory in the fact that the reduction of births applies mainly to higher parities.

Selection and Characteristics

Most of the studies discuss or show the importance of selection mechanisms in the fertility of immigrants. The in general higher fertility of immigrant women is traced back to higher shares of married women in the respective groups

(e.g., Kane 1989). The hypothesis of the interrelation of events, however, has not been tested in previous studies.

To the extent that studies take into account compositional differences, they find fertility differentials reduced. Marital status (Haug 2002), educational attainment (Nauck 1987; Mayer and Riphahn 2000; Haug 2002), and the type of place where a woman spent her childhood (Kane 1986; Nauck 1987) all play a role. For the type of the area of origin, Nauck (1987) sees here mainly an indirect influence, since the degree of urbanization has a strong impact on the educational opportunities of women. Controlling for these covariates reduces or extinguishes fertility differentials between immigrants and West Germans, as well as between migrants and the women in the respective countries of origin, and supports the hypothesis of characteristics.

Disruption

Previous studies on "guest-worker" fertility in Germany did not find any evidence for a disruption effect. Such an effect was, however, shown for immigrating ethnic Germans. They usually migrate in complete families with an almost even share of the sexes. For ethnic Germans coming from the former Soviet Union, Dinkel and Lebok (1997, p. 259) have found that "migration to Germany more or less ended the process of family extension." While the relative fertility level of immigrated ethnic Germans before their migration was more than 50% higher than that of German women, the fertility of immigrated ethnic Germans dropped during the initial years after their move to Germany to about 40% of the level of Germans in the same age groups. Dinkel and Lebok (1997) offer the adjustment to the highly competitive West German living conditions, in particular to the labor market, as an explanation for that decline. Their results show an even bigger decline in fertility for persons of smaller religious groups (mainly Mennonites and Baptists) than for Protestants, Catholics, and Orthodox Christians (Dinkel and Lebok 1997).

Legitimacy

Finally, the hypothesis of legitimacy has not received much attention in the German context yet. We do not assume it to be of much importance for the study population. In terms of the legal framework in Germany, it is not possible to obtain German citizenship through the birth of a child in Germany. Before 2000, German citizenship was based on descent (*ius sanguinis*). An application for naturalization was possible only after a stay of 15 years in Germany. Hence, most of the immigrant workers who moved to West Germany in the 1950s and 1960s remained "foreigners" for a long time, or are still "foreigners."

However, not possessing German citizenship does not necessarily mean that an immigrant cannot stay in the country. Migrants from Italy, Spain, and Greece have freedom of movement and residence since these countries are members of the

European Union, and therefore do not need German citizenship in order to stay in the country. Although these rules do not apply to emigrants from Turkey and the former Yugoslavia, women from these countries may nevertheless have a relatively small problem obtaining a residence permit due to the "guest-worker" conditions as described above.[5]

Diehl (2002b) shows that the numbers of naturalizations have been relatively low among the "guest-worker" population. Only about a third of the persons of Italian or Turkish origin had German citizenship in 2000 (data of the Integration survey). Interestingly, the likelihood of having German citizenship, or of applying for naturalization, is higher among persons of foreign descent who were born in Germany than it is for first-generation immigrants. This suggests that the acquisition of German citizenship is not a priority among first-generation immigrants of the "guest-worker" groups and therefore not relevant in order to explain their fertility behaviors.

2.5 Research Approach and Working Hypotheses

The main research goal of our study is to compare the fertility of international migrants and their descendants in West Germany to the fertility of West German women. We give special attention to the impact of the migration process on the timing of subsequent events. Therefore, we apply the life-course approach.

2.5.1 The Life-Course Approach

According to the life-course perspective, an individual's life is composed of a series of transitions or life events, which are embedded in trajectories or careers (or status passages) that give them distinct form and meaning (Elder 1985, 1994). The aspect that gives a transition a distinct notion is the irreversibility or path-dependency of the processes described. This implies that events depend on preceding stages in the process (de Bruijn 1999). The life-course approach examines life trajectories of individuals with the aim of explaining their movements between various statuses. Therefore, the timing of events in one life domain of an individual relative to changes in other life domains and changes in social relations and context is of crucial importance. Giele and Elder (1998) identify four key factors that determine

[5]The legal conditions are different for other immigrant groups. Investigating the migration strategies of Cameroonians, Fleischer (2007) suggests the possibility that migrants can gain a residence permit if they have custody of a child with a partner who has either German citizenship or a residence permit. But even so, marriage remains the crucial factor both for those people who aim at gaining legal status in Germany, and immigrants moving to Germany owing to family reunion.

the shape of an individual's life course: human agency, linked lives (social relations), historical and geographical context, and timing of life events.

Whereas research on fertility has paid attention to changes in education and occupation, and while family events are increasingly considered in migration studies, life-course techniques have not been extensively applied to the effect of migration on fertility. The hypotheses discussed consider individuals' responses to changes in the environment, an interplay between different careers, embeddedness in social networks, and the importance of time. However, due to a lack of retrospective data, the vast majority of the literature uses aggregate-fertility measures and therefore cannot answer the hypotheses in full.

The studies on fertility of international migrants that are based on longitudinal data come to similar results regarding the hypothesis on interrelation of events. They find a close connection between migration and family formation (Singley and Landale 1998; Andersson 2004; Lindstrom and Giorguli Saucedo 2007). These studies did not find much evidence for fertility disruption after immigration. But by examining transitions to higher-order births, they show the hypothesis of adaptation to be true (Andersson 2004; Andersson and Scott 2005, 2007; Lindstrom and Giorguli Saucedo 2007). Studies on fertility of internal migrants find evidence for both selection and adaptation (Courgeau 1989; White et al. 1995; Lindstrom 2003; Jensen and Ahlburg 2004; Kulu 2005, 2006). As these studies suggest, a parity-specific research method that takes duration of stay into account is necessary in order to gain a reliable picture about the fertility of immigrants. Toulemon (2004; Toulemon and Mazuy 2004) shows the importance of controlling for age at immigration: the older immigrants are at immigration, the more children they have had prior to the move, and the lower the number of children born after the move.

Our study takes only the time after immigration to West Germany into account, the immigrant generations are distinguished, and a parity-specific view is applied. The main research questions of our study are, therefore: Are transition rates to first, second, and third births of immigrant women of the various generations different from those of West German women? If so, what is the extent to which any fertility differentials can be explained by immigrants' selectivity, by duration of stay in West Germany, and by compositional differences? What are the factors that play a role in birth behavior? The immigrant generations are compared to West Germans, and we ask if there are differences between national sub-groups.

Our guiding hypotheses are derived from the theoretical framework presented in Sect. 2.1 and consist of two parts: In Part 1, we formulate hypotheses for the entry into motherhood (first conception); in Part 2, the hypotheses are applied to the transitions to subsequent children (second and third conception). For the first immigrant generation, the hypotheses for the transition to a first child applies only to those who moved to West Germany without having given birth before the move. The framework for the analysis of a second and a third child also admits women who moved to West Germany after giving birth to a first or a second child, respectively. Women of the second migrant generation are included in both parts of the hypotheses.

Our study takes into account the socio-demographic background, as well as the marital and fertility histories of all immigrant and West German women. For first-generation immigrants, marriage and childbearing before migration influence fertility after the move. It can be hypothesized that the duration of stay in West Germany is of crucial importance for the economic situation of a person or a household, as well as for socio-cultural adaptation (and vice versa, these factors influence the stay duration, i.e., the more a person is adapted to the destination society, the longer the person continues to stay there). Stay duration, economic factors, and socio-cultural factors have an impact on fertility. Therefore, our analyses will include the time since arrival of first-generation immigrants and socio-cultural covariates (cf. Rumbaut and Weeks 1986).

Before turning to the hypotheses, we comment briefly on the terminology as used. Most statistics in Germany use nationality as distinguishing criteria, and speak of foreigners and Germans respectively. The differentiation between Germans and foreigners stems from the perception of many Germans who see Germany as an ethno-nation, rather than as a nation state. Hence, immigrants' children who were born in Germany but have not been granted German nationality are regarded as foreigners, too. Immigrants who have the right to apply for German nationality immediately after their arrival – which is the case for ethnic Germans – are considered Germans in official statistics, although they undergo a real migration process. This hides the migration backgrounds of these groups, as well as the histories of other immigrants who underwent naturalization, or of immigrant children who were granted German citizenship. Therefore, a terminology that distinguishes only between Germans and foreigners does not capture any background of international migration sufficiently (Bade 1994; Münz and Ulrich 2000).

Since the emphasis of our study is on the impact of the migration (background), the target group of our attention is named "immigrant." (In addition, we want to avoid the term "foreigner" since it has received more and more negative connotations in the public sphere, and since "foreigners" have been increasingly stigmatized as such [Jung and Niehr 2000].) Persons without any background of international migration are named (West) Germans. We prefer here the reference to nationality instead of the term non-migrants because non-migrants would also include internal migration.

A distinction is made between the immigrant generations by using the terms first and second generations. Persons who left their countries of birth and moved to West Germany when they were adults are counted in the first generation of immigrants. The children of the first immigrant generation, regardless of whether they immigrated as children or were born in Germany, are referred to as second-generation (im)migrants. It is clear that this word is somewhat vague since the migrant children did not move country on their own, or did not move at all. Nevertheless, we prefer this terminology since, again, it emphasizes the criteria of interest in this study (a further de-composition of the group of migrant descendants – as suggested by Rumbaut 2004 – into generations 1.5 and 2 is not feasible due to the sample size). International literature has suggested different terminologies, such as the distinction between the allochthon and the autochthon population in francophone publications

(e.g., Eggerickx et al. 2002), but this does not solve the problem of attributing a move to somebody who did not move. The same is true for the somewhat new suggestion to use just the term "second generation" (without the addition of "migrant") (e.g., Crul and Vermeulen 2006). In this case, it is not clear what second generation refers to.

2.5.2 Hypotheses, Part 1 – Entry into Motherhood

The working hypotheses for the transitions to a first, a second, and a third birth among immigrants of the first and second generations in West Germany are as follows.

H1: Disruption

First-generation immigrants: According to previous theory for first-generation immigrants, we should expect a disruption effect on fertility caused by the move. The hypothesis would be that the move delays childbearing and/or decreases first-birth intensities of immigrant women shortly after immigration.

Second-generation immigrants: According to the minority-group argument, the hypothesis of fertility disruption can be extended to second-generation immigrants. One would expect lower birth risks due to the effects of frustration and uncertainty as they are associated with the minority-group status in general.

In addition, we pay attention to the employment status of the woman. According to the minority-status argument, relatively low first-child transition rates should be expected when women of the first immigrant generation are employed in West Germany. If there is such a fertility-decreasing effect of employment, this would be found also for second-generation immigrants. Since women's employment and childbearing also represent competing careers in West Germany for the majority population, such a hypothesis may be hard to test. Therefore, we extend the hypothesis to the status of non-employment. Kreyenfeld (2001a) has shown that West German women use times of unemployment for childbearing, i.e., have higher birth risks during unemployment. If immigrants and their descendants view their stay in West Germany with uncertainty, and strive for financial security (before or instead of investing in childbearing), their birth risks during non- or unemployment should be lower than those of West Germans.

H2: Interrelation of Events

First-generation immigrants: The hypothesis on the interrelation of events applies to first-generation immigrants only. It competes with the disruption hypothesis and predicts elevated birth risks in particular in the first few years after the move.

The countries that are selected for our study had a tradition of higher fertility in earlier years. Women of the first immigrant generation who came to Germany from these countries moved to a lower-fertility context. A large share of these moves may have been due to family reunion, i.e., to join a spouse belonging to the first immigrant generation at an earlier time. In recent years, union formation may be of particular importance for immigration to Germany as the second-generation immigrants living in Germany have grown into marriage ages. When women immigrate to Germany in order to marry a man of the second immigrant generation, who grew up in Germany, the formation of the conjugal household usually takes place in Germany. In either case, the birth of a first child may be desirable among immigrant women and their partners in order to complete the union formation. A situation that involves such major life changes – as the decisions to leave one's home country and to enter into a marriage can be characterized – may also create uncertainty. Since children can be regarded as reducing uncertainty in certain situations in life (Friedman et al. 1994), first-birth intensities may be elevated shortly after immigration.

H3: Adaptation

First-generation immigrants: Next, we want to find out whether or not there is an adaptation effect caused by the duration of stay of first-generation immigrants (this hypothesis does not apply to the second immigrant generation). The longer immigrants live in the new environment, the more they get to know the fertility behavior and norms that are dominant at destination, and the more they are exposed to the socio-economic conditions that structure daily life. Therefore, immigrants may be more likely to behave in a manner similar to West Germans as the length of stay increases.

The labor-force participation of a person is included as a channel of adaptation. Whereas the disruption hypothesis argues that persons who belong to a minority group may aim at improving their economic conditions, and may therefore suppress fertility intentions in general, the context of the receiving society is now taken into account. Andersson and Scott (2005) suggest that the answer to the question of whether immigrants engage in fertility behavior or in the labor force depends on general societal conditions. In Sweden, for example, where "no general pattern of a very pronounced incompatibility between childbearing and labor-force participation for the majority of native-born women" is found (Andersson and Scott 2005, p. 23), immigrant women of all sub-groups are more likely to start childbearing when they are established in the labor market.

By contrast, the West German welfare state has supported mothers who stay at home with their children for decades (Kreyenfeld 2001a; Zabel 2006). In contrast to the policies of the respective countries of origin, mothers who stay at home receive financial support in West Germany. Note, in addition, that women from non-EU (or non-EG) states are subject to special conditions for immigration when they arrive due to family reunion, such as the denial of permission to work in the initial

period after arrival. Therefore, we expect that women of the first immigrant generation do not strive to become gainfully employed in the first years of stay in West Germany, and that non-employment may not have a fertility-decreasing impact. Rather on the contrary, times of non- or unemployment may be seen as the best time to realize family formation and first-birth risks of immigrant women may be high during non-employment, similarly to those of West Germans. (This hypothesis competes with the disruption hypothesis.)

Since an adaptive process can be accelerated or hampered by the choice of a partner, the partner's country of origin will be included in this analysis, too. The adaptive process may accelerate when a woman with an immigration background is married to a man of the indigenous population (Saenz et al. 1994; Andersson and Scott 2007). Therefore, lower transition rates to motherhood are expected for immigrant women married to a West German man, compared to an immigrant woman who is married to a partner from the same country of origin.

H4: Socialization

First-generation immigrants: The women in our study stem from five countries of origin, or are born to a parent from one of these five countries: Turkey, former Yugoslavia, Greece, Italy, and Spain. A common trait of these countries is that they all experienced a fertility decline in the past four decades. However, there are differences in the timing of the decline and in the patterns of fertility. We expect that these differences are reflected in the first-birth intensities of emigrants from these countries to West Germany. Therefore, first-generation immigrant women from Turkey may have higher transition rates than their counterparts from Southern and Southeastern Europe, because women in Turkey enter earlier and more often into motherhood than women of the remaining listed countries. This has also been seen for Turks in other countries of destination (Alders 2000; Andersson 2004).

When the immigration background of the partner is taken into account, we expect that the effect of socialization is even bigger for women who are married to a partner from the same country of origin than for women who are married to a West German.

Second-generation immigrants: In order to see long-term effects of international migration, the first-birth risks of first-generation immigrants are compared to those of the second generation. Second-generation immigrants experienced the low-fertility context of West Germany much longer than their parents' generation did. Therefore, first-birth intensities may be similar to those of West Germans, but lower than those of first-generation immigrants.

Competing with this hypothesis is the suggestion that birth intensities of second-generation immigrants may more closely resemble those of the first generation, and may be different from those of West Germans when the framework of minority groups or segmented assimilation is taken into account. According to this line of reasoning, migrant children may remain in their parents' national communities within the host country and preserve their values and behaviors. It has not yet been

proven though that immigrant populations in West Germany preserve a closed sub-culture in this sense. If they do so, the elements, as well as the extent of preservation and lack of openness of the sub-culture may vary between groups, and may also depend on the size of the respective group. In general, West Germany and other Western European countries provide a societal framework sufficiently different from that of the United States as to make the application of U.S.-context theories to West Germany not particularly appropriate. For example, the welfare state affects individuals' behavior in Western Europe to a much greater extent – as can be seen in the role of employment status for childbirth in countries with different conditions – whereas the welfare state is much weaker in the United States. Therefore, we assume that the second generation of immigrants in West Germany is more influenced by overall societal factors than by conditions in the immigrant community, and that sub-culture has no fertility-stimulating effect.

H5: Characteristics

First- and second-generation immigrants: Finally, we review the hypotheses of selection and characteristics. The educational attainment (as a proxy for socio-economic status) of immigrant women is, in general, lower than that of women of the host society. These differences may cause fertility levels to differ as well. For the most part, we expect that higher education makes childbearing intensities lower (Mayer and Riphahn 2000; Kreyenfeld 2001a). When there is a trend towards attaining higher levels of education among second-generation immigrants than was achieved by the first generation, these compositional differences may cause fertility differentials between the generations as well.

Moreover, we control for the partner's and for parents' educational attainment and include indicators of the cultural background in the estimates. These are religious affiliation, religiosity, and the characteristics of the place where the woman lived at age 15. If the composition of the immigrant groups is different from that of the West Germans, fertility differentials may be reduced when we control for these factors.

2.5.3 Hypotheses, Part II – Transitions to a Second and a Third Child

H1: Disruption

First-generation immigrants: Assuming again that a move abroad constitutes a stressful situation in life, it is logical to conclude that the stress associated with an international move will be even greater when a woman migrates with one or two children. At least two persons (possibly also the partner) have to cope with the

changes. Therefore, it can be hypothesized – in accordance with the assumption for the transition to a first child – that those women of the first immigrant generation who moved to West Germany when they already had one or two children will have lower transition rates to a second or third birth than women without any, or without recent, migration experience.

When we compare first-generation immigrants who experienced the first and/or second birth in West Germany to those immigrating as mothers, it is possible that an immigrant who became a mother in Germany, has higher transition rates to a subsequent birth because her living circumstances may have become more stable by that stage. On the other hand, the minority-status argument may gain more importance when we consider subsequent children: Women who have spent some years in West Germany already may have experienced a downward trend in social mobility and a worsening in their economic and/or living conditions. When these immigrant women gave the first birth in Germany they have already "confirmed" the marital union. Therefore, they may now, i.e., after the first child, aim to realize goals other than family enlargement. Therefore, their transition rates to a subsequent child may be expected to be relatively low compared to West Germans.

Second-generation immigrants: According to the minority-status argument, depressed subsequent-child transition rates should be observed for the second-generation immigrants, too.

H2: Interrelation of Events

First-generation immigrants: In line with the hypothetical framework of the first-child behavior, the second hypothesis contradicts the disruption argument and posits higher birth risks. For one- or two-child mothers moving to West Germany a (subsequent) marriage may be an exceptional case. Nevertheless, it can be assumed that several events appear within a short time frame for the study population: the reunion of the spouses and the family. Since it was typical for the "guest-worker" immigration that the partners moved at different points in time, their reunion can be seen as a formation of a new household or as a re-formation of an old household under new circumstances. This re-formation and the migration of the woman and the first one or two children occur simultaneously, and may trigger an effect of "union or family confirmation." This can also be seen as a time to catch-up with births which were postponed in anticipation of the move.

H3: Adaptation

First-generation immigrants: In correspondence with the hypothesis for the first child, we expect a convergence of fertility risks by stay duration of first-generation immigrants towards the levels of West Germans. The assumption is again that immigrants react to similar circumstances – mainly their employment situation – like West Germans do. This contradicts the assumption of fertility disruption.

H4: Socialization

First-generation immigrants: Our hypothesis is that differences by national subgroup appear mainly in the transitions to a second or a third child. Since a first child is almost universal in all countries of origin that are included in our analysis, country differences in first-birth risks may appear only due to different ages at first-time motherhood. However, the frequencies of second and third children are different in the respective countries of origin. If socialization has an influence on fertility behavior, higher transition rates to a second and a third child are expected for women of the first immigrant generation from Turkey than for women from the former Yugoslavia, Greece, Italy, and Spain.

Second-generation immigrants: Again, in line with the argumentation for the entry into motherhood, second-generation immigrants may show birth risks which are similar to those of West Germans, but are different (i.e., lower) from those of the first immigrant generation. For second-generation immigrants, it is assumed that the West German context is more dominant than the country background of the parents, and that the fertility behavior of the second generation does therefore not vary between the different country groups.

H5: Characteristics

First- and second-generation immigrants: Finally, we review the assumption of selection and characteristics. If the first-birth behavior of immigrant women in West Germany is characterized by a relatively early start, the transition rates to a higher parity may be elevated compared to West Germans.

Moreover, the differences in educational attainment may cause differences in fertility levels as well. Mainly (and in contrast to first-child behavior) we assume that higher education increases childbearing intensities (Kreyenfeld [2002] on parity 2, Kravdal [2001, 2007] on parities 2 and 3). Again, our analysis controls for the educational background of the partner and the woman's parents, as well as for cultural background variables. In addition, the sex of the first and second child is considered.