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# *Acculturation Identity and Labor Market Outcomes*

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# Acculturation Identity and Labor Market Outcomes\*

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## Abstract

This paper explores the identity formation of a cohort of students with immigrant backgrounds in Sweden and the consequences of identity for subsequent labor market outcomes. Unique for this study is that identity is defined according to a two-dimensional acculturation framework based on both strength of identity to the (ethnic) minority and to the (Swedish) majority culture. Results indicate that what matters for labor market outcomes is strength of identification with the majority culture regardless of strength of (ethnic) minority identity. Labor market outcomes vary little between the assimilated and the integrated who have in common a strong majority identity but varying minority identity. Correlations between identity and labor market outcomes are however, an entirely male phenomenon.

**JEL Classification:** J15, J16, J21, Z13

**Keywords:** Ethnic Identity, Acculturation, Ethnic minorities, Employment, Income

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# 1 Introduction

Ethnic identity, the degree to which ethnic minorities associate themselves to their ethnic background culture, has been found to be of central importance to individual well-being, self-esteem and such concepts as sense of belonging and adaptation to the majority culture (Berry & Sam, 1997; Phinney, 1990; Phinney *et al*, 2001; Virta *et al*, 1999). Recently, identity has received interest among economists and several papers have studied ethnic identity and its consequences for labor market and educational outcomes (Battu *et al*, 2005; Bisin *et al*, 2006; Constant *et al*, 2006a; Constant *et al*, 2006c; Lazear, 1999; Mason, 2004; Pendakur & Pendakur, 2005; Zimmermann *et al*, 2006). The majority of these studies model identity as a linear process, where individuals with foreign backgrounds either choose to identify with the majority culture or to their ethnic minority culture. In other words, individuals are assumed to adopt so-called oppositional identities where a stronger identification to the majority culture goes hand-in-hand with a weaker identification to ethnic minority cultures.<sup>1</sup> Studies within cross-cultural psychology however, indicate the importance of a two-dimensional model for identity formation (acculturation), which treats the degree of identification to the majority culture as a separate concept from the degree of identification to the minority culture.<sup>2</sup> The two-dimensional acculturation framework therefore allows individuals, for example, to simultaneously feel a strong affinity for the majority and minority culture. Using unique survey data on a cohort of students with immigrant backgrounds (both first and second-generation immigrants) matched to register data on employment, income and education, this study analyzes identity within the two-dimensional acculturation framework and its consequences for labor market outcomes

Individuals with foreign backgrounds must often relate to at least two different cultures, the majority culture in the host country and their own ethnic background culture (minority culture). Acculturation can be defined as individual changes in attitudes, behaviours, values and cultural identity of such intercultural contact. Berry (1997) identifies four distinct acculturation strategies for how individuals relate to two cultures. The first, *integration*, implies a strong sense of ethnic belonging together with a strong national identity. *Assimilation* implies a strong national identity but a weakened tie to ethnic origins while

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<sup>1</sup> Some recent exceptions are Constant *et al* (2006a, 2006b) who study ethnic self-identification using a two-dimensional definition of identity and Constant *et al* (2006c) who study the correlation between identity and employment using the two-dimensional framework.

<sup>2</sup> See for example, Berry (1980, 1984, 1997), Phinney (1990) and Ryder *et al* (2000).

*separation* is the opposite, a strong ethnic affiliation but weak ties to the majority culture. Finally, *marginalization* implies weak ties to both ethnic origins and the national identity.

If minority identity and majority identity have a non-linear relationship, then the oppositional identity hypothesis which treats minority identity as the opposite of majority identity, may give misleading results regarding especially the role of minority identity for labor market outcomes. The hypothesis is based on an underlying assumption that a strong minority identity always goes hand in hand with weak majority identity. Using the two-dimensional model of identity within the acculturation framework allows us to analyze the correlation between identity and labor market outcomes in a more flexible manner. As such we can answer question of the type, do individuals who identify only with the majority culture outperform individuals who identify with both the majority and minority culture? Given the importance of minority identity for individual well-being, this issue can have important implications for labor market policy if minority identity per se is found to be less important for labor market success.

The first part of the study uses cross-section information from 1995 to evaluate the relevance of a one-dimensional model for identity formation such as the oppositional identity hypothesis. The probability of identifying strongly with the majority (minority) culture is estimated controlling for strength of minority (majority) identity as well as a number of other characteristics thought to influence identification to the majority (minority) culture. The idea is to estimate if a negative linear relationship between identification to ethnic minority and majority cultures exist. Other observed patterns support the need for more flexible models of identity.

In the second part of the paper, survey data combined with register data for the years 1995-2002 are used to investigate the correlation between acculturation strategy and labor market outcomes. Initially employment equations are estimated controlling for acculturation identity and other relevant characteristics. Thereafter income equations are estimated for those indicating some form of employment during the year. Gender differences in labor outcomes by acculturation phase as well as differences by (aggregated) national background are also explored.

Results presented here indicate that the association between strength of minority and strength of majority identity depends on which process is modeled. Estimation of the strength of minority identity yields results indicating no association between the degree of identification with the Swedish majority culture and the degree of identification with the ethnic minority culture. On the other hand, in estimation of the strength of majority identity, strength of minority identity is found to have a negative but not linear association to strength of majority identity. These results imply that identity is more complex than the linear association implied in oppositional identity theories, supporting the need for a more flexible modelling of identity such as the two-dimensional acculturation framework.

Results from the second stage of the analysis show that what matters for employment and income is strength of identification with the majority culture, regardless of strength of ethnic identity. Only small and weakly significant differences are found, on average, between the assimilated and the integrated in employment equations and no differences in income equations. The integrated and the assimilated have in common a strong attachment to the majority culture but varying attachment to ethnic background cultures. These results imply that a strong ethnic identity is not detrimental for labor market outcomes if simultaneously combined with a strong identification to the majority culture. Interestingly, significant correlations between identity and labor market outcomes appear to be a male phenomenon.

The remainder of the paper is as follows: Section 2 discusses the prior literature on identity formation and the economic consequences of identity. Section 3 describes the data and empirical set-up. Results are presented in Section 4 and concluding remarks in Section 5.

## **2 Identity and Economics: A Brief Overview**

### **2.1 Identity Formation**

Those with foreign backgrounds, first or second-generation immigrants, must often relate to at least two cultures, the majority culture in the host country and their own ethnic background culture (minority culture). In the field of cross-cultural psychology, individual development and adaptation in such an environment is captured by the so-called acculturation process. Acculturation was originally defined as "those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent

changes in the original culture patterns of either or both groups" (Redfield, Linton & Herskovits, 1936, p.149). In other words, acculturation refers to individual level changes, both culturally and psychologically, in identity, preferences, attitudes, habits and more, coming from intercultural contact.

By definition, acculturation is therefore a process that may affect both individuals and groups in contact with each other. The acculturation process is however unlikely to be evenly distributed as the minority group is more likely to change their behavior in the direction of the majority group than vice versa. Lazear (1999) models this process, in an economic context, showing that members of a minority culture have higher incentives to adopt the majority culture and gain a larger pool of potential trading partners, but that this process varies according to the size and concentration of the minority ethnic group.

The dimensionality of acculturation is debated in this literature. Acculturation can be seen as a one-dimensional linear process where individuals either reject their ethnic minority culture in favor of the majority culture (assimilate) or reject the majority culture in order to maintain close ties to their ethnic minority culture (separate from the majority society), so-called oppositional identities. Closely related to the one-dimensional acculturation model is the oppositional culture hypothesis attributed to Fordham & Ogbu (1986) who argued that institutional discrimination lowered the returns to education for black Americans, thereby starting a process in which black students viewed educational achievement as a white norm. Black students who put effort into education were harassed for "acting white" and rejected by their peer group. In the society depicted by the oppositional identity hypothesis, norms of the minority group force members of the minority to choose sides, i.e., to either ignore educational achievement and be accepted by peers, or put effort in to education, "acting white", and thereby loose acceptance from the peer group. Within economics, the oppositional identity hypothesis has been modeled by among others Austen-Smith and Fryer (2005), Cook and Ludwig (1997), Ferguson (2001), Fryer (2004), Fryer & Torelli (2005), Patacchini & Zenou (2006).<sup>3</sup>

Due to perceived shortcomings of the one-dimensional model, for example a growing awareness that many immigrants simultaneously identify to the minority and the majority

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<sup>3</sup> For economic studies on racial identity, see also Darity, Mason and Stewart (2004), Mason (2004a), Bodenhorn & Ruebeck (2003) and the references therein.

culture, several cross-cultural psychologists argued for the use of multidimensional acculturation models (Berry, 1980, 1984, 1997, 2005; Phinney, 1990; Phinney *et al.*, 2001, Ryder *et al.* 2000, Sanchez and Fernandez, 1993). Berry (1980, 1984) developed a two-dimensional acculturation framework where attitudes and identification to the ethnic background culture and the majority culture respectively were viewed as fundamental to the acculturation process. Within this framework, Berry (1997) identified four individual acculturation strategies; *integration* (identification with both the majority and minority culture), *assimilation* (identification with the majority culture but rejection of the minority culture), *separation* (identification with the minority culture but rejection of the majority culture) and *marginalization* (rejection of both the minority and majority culture).

Empirical studies on acculturation, in cross-cultural psychology, have found that integration (a strong attachment to both the minority and majority culture) is positively associated with well-being and social adaptation while the opposite is true for marginalization (Berry & Sam, 1997; Phinney *et al.*, 2001). In a Swedish context, Virta and Westin (1999) examine the psychosocial adjustment of adolescents with immigrant backgrounds with varying acculturation identities.<sup>4</sup> Two dependent variables were used in estimation, psychological well-being (self-esteem, life satisfaction and psychological symptoms) and social adjustment (school adjustment and behavior problems). Results show that the integrated identity was associated with positive psychosocial outcomes while the marginalized and assimilated identities were associated with negative outcomes.<sup>5</sup>

The concept of identity and its economic consequences is receiving growing interest among economists (Akerlof, 1997; Akerlof & Kranton, 2000; Bodenhorn & Ruebeck, 2003; Constant *et al.*, 2006; Darity *et al.*, 2004; Mason, 2004; Patacchini & Zenou, 2006; Pendakur & Pendakur, 2005; Rumbaut, 1994; Zimmerman *et al.*, 2006). In their seminal work in the field, Akerlof and Kranton (2000) formalize the concept of identity in a model including identity in the utility function, allowing for interdependence between individual identity and economic behavior. In the model, individuals derive utility from the category (in-group) to which they

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<sup>4</sup> Acculturation identity was based on five domains of life: cultural traditions, language, marriage, social activities and friends. Participants in this study were adolescents (mean age 15.5 years) with Finnish, Kurdish, Latin American, Turkish and Vietnamese backgrounds and a control group of Swedish adolescents. Both first and second-generation immigrants were included.

<sup>5</sup> For certain groups of immigrants, integration was associated with positive outcomes (Finns, Turks, Kurds and Latin Americans) while assimilation (Finns, Turks, Kurds, Vietnamese) and marginalization (Finns and Turks) were associated with negative outcomes. Neither socio-economic status nor immigrant status (first or second) was found to be important for the two dependent variables.

belong, i.e., from how well they fit into that category, but also from how well others follow the prescribed behavior of the specified category. The Akerlof and Kranton model therefore captures the concept of oppositional identities or at least how it is commonly interpreted. Members of the minority group either reject the minority culture in favor of the majority culture or, vice versa, reject the majority culture in favor of the minority culture in order to conform to own group norms.<sup>6</sup> These norms can however change over time.

Studies focusing on immigration and identity formation include Bisin *et al* (2006) who develop a model for ethnic identity formation focusing on how choice of identity is affected by cultural transmission and socialization within the family, peer effects and social interactions. In their empirical analysis based on UK data, the main determinants for ethnic identity are experiences of racial harassment, language spoken at home and with friends, quality of housing and family structure. Zimmerman *et al* (2006) study the ethnic self-identification of migrants in Germany as well as identification to the German majority culture. Results from this paper indicate that human capital acquired in origin countries lead to lower identification with the majority culture. Education acquired post-migration, in the host country, does not affect attachment to the majority culture. Constant *et al* (2006), in addition to a one-dimensional concept of identity, also employ a two-dimensional concept to study the identity of immigrants in Germany. Their definition of identity is thus very similar to the four acculturation strategies proposed by Berry (1997) and used in our study. Constant *et al* show that acculturation identities vary by immigrant group. Young migrants are found to assimilate and integrate the most. Immigrants with higher education acquired prior to immigration are found to integrate but not assimilate. Results are again found to vary by national background.

## **2.2 Empirical Studies on the Economic Consequences of Identity**

Few empirical studies have examined the relationship between identity and labor market outcomes for immigrants. To our knowledge, those that have are primarily based on a one-dimensional identity framework analyzing the consequences of either strong minority identity or attachment to the majority identity but, with one exception, never the interaction between them. Battu, Mwale and Zenou (2003) construct a model showing the importance for non-

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<sup>6</sup> Note that taste-based discrimination (Becker, 1957) is consistent with the Akerlof and Kranton model. The disutility for an employer or fellow employees from a minority worker could stem from loss of identity.



whites to interact with individuals of the majority group for labor market outcomes.<sup>7</sup> The empirical analysis, based on UK data, shows that non-whites who strongly disagree with “being British” are less likely to be employed. Interestingly, non-whites who strongly agree with “belonging to their original ethnic group” do not face an employment penalty. Pendakur and Pendakur (2005) examine the consequences of ethnic identity on employment finding that for European ethnic minorities strength of minority identity is positively associated with informal methods of securing employment while for visible minorities, ethnic identity is correlated with lower occupational prestige, a finding not found for white minorities. Mason (2004) presents empirical results regarding identification to the majority culture and skin color for the labor market outcomes of Hispanic Americans. For many Hispanic groups, adopting a non-Hispanic white racial identity is associated with higher income and wages. However, a non-Hispanic racial self-identity cannot overcome negative penalties associated with a dark complexion or non-European phenotype.

Similar to our study, Constant et al (2006c) examine the correlation between a two-dimensional identity concept and employment for first generation guest workers in Germany. Results indicate no systematic employment differences between integrated and assimilated men but higher employment probabilities for integrated women compared to assimilated women. Separated and marginalized men are associated with lower employment probabilities compared to assimilated men but no such association is found for women. The direction of causality is however unclear. Does a strong German identity increase the probability of employment or do positive employment outcomes increase identification to German culture?

### **3 Data and Empirical Set-up**

The data used in estimation stems from the *Follow-up Surveys of Pupils* from Statistics Sweden (SCB). This is a series of surveys based on a sample of 16,060 students who graduated from nine-year compulsory school in the spring of 1988 in Sweden. The surveys were conducted in 1990, 1992 and 1995. In this study, we use the only survey available today for estimation, the 1995 survey, which was conducted 7 years after graduation from compulsory school when the majority of respondents were 23 years of age. The 1995 survey samples the entire population of students with immigrant backgrounds, defined as having one

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<sup>7</sup> In the model, jobs are obtained through contacts and whites are assumed to have the best contacts. Interactions with whites therefore, have a positive effect on employment probabilities.

or both parents born abroad, who belong to the 1988 cohort, as well as a control group of students with Swedish backgrounds. The survey data provide unique information on a number of interesting questions concerning ethnic identity, identification with the majority culture, language networks, employment history and future employment expectations. At our request, the 1995 survey was merged to the LOUISE dataset for the years 1995-2002.<sup>8</sup> LOUISE contains detailed register information on personal and demographic characteristics, education, income and employment for all individuals 16 years and older registered as living in Sweden at the end of respective year. As such we are able to follow our cohort of students until 2002 when the majority of the sample are 30 years of age and presumed to have permanently entered the labor market. The sample estimated on consists of 3,089 individuals with immigrant backgrounds (first and second-generation).<sup>9</sup>

The majority of immigration to Sweden during the post WW2 period has been and continues to be from other Nordic countries, primarily from Finland. Formally, a common Nordic labor market was established in 1954 but migration legislation was, until the late 1960s, non-restrictive and aimed at attracting foreign labor to an expanding export industry. In 1954 Sweden signed the Geneva Convention opening for refugee migration. Immigration before the mid 1970's consisted primarily of labor market immigration from Nordic and European countries. After the mid 1970's, refugee immigration from primarily Non-European countries increased greatly and today accounts, together with immigration due to family re-unification, for approximately 50 percent of the total immigration to Sweden.

The sample used for estimation in this study consists of individuals born in Sweden in 1972 with immigrant backgrounds or of immigrants (foreign-born) arriving in Sweden before 1988. As such the sample used in estimation is not representative of today's distribution of persons with immigrant backgrounds. Most noticeably, the sample has relatively few individuals with non-European backgrounds (only approximately 12 % of those with immigrant backgrounds in the sample have non-European heritage). Immigrants in the sample are also characterized by a relatively long duration of residence in Sweden as well as a low age at entry.<sup>10</sup> In order to

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<sup>8</sup> LOUISE is the Swedish acronym for Longitudinal Database for Education, Income and Employment provided by Statistics Sweden.

<sup>9</sup> Dropped from estimation are 164 individuals with mixed foreign backgrounds and 1,328 individuals who did not respond to survey questions concerning identity. Due to systematic non-response from the original population surveyed, all estimations are weighted in order to be representative of the 1988 cohort of students.

<sup>10</sup> On average, foreign-born survey respondents have lived in Sweden for 15 years in 1995 at which time the 1988 cohort of students were 23 years of age.

be included in the 1995 survey, foreign-born respondents must have migrated to Sweden before the age of 16. Fifty percent of the respondents in the sample estimated on are foreign-born.

### 3.1 Identifying Identity

The three main variables of interest in this study are *minority identity*, *majority identity* and *acculturation identity*. Each of these variables is based on answers to survey questions aimed at measuring degree of identification with the Swedish majority culture and identification with the ethnic minority culture. Two questions are asked: To what degree do you feel affinity to Swedish culture? To what degree do you feel affinity to your original background culture? Answers to these questions are coded into a four-level scale based on the answer options available (completely, partially, little, not at all). The variables ethnic identity and majority identity are coded directly after the relevant corresponding question while acculturation identity is coded using responses to both questions. An individual is classified into one of four mutually exclusive acculturation identities described above, i.e., *assimilation*, *integration*, *separation* and *marginalization*. This categorization is depicted in Figure 1. Individuals that completely or partially identify with the Swedish majority culture but little or not at all to their original (ethnic) minority culture are categorized as *assimilated*. At the other extreme, those that identify with the minority culture but do not identify with the majority culture are categorized as *separated*. Individuals that identify both with the majority and minority culture are categorized as *integrated* and finally, individuals that do not identify with either culture are categorized as *marginalized*.

-- Figure 1 here --

Figure 2 shows the distribution of acculturation identity by national background for all individuals in the sample. The majority within each aggregated national group identify themselves as integrated. Those with Finnish background have the highest share in the assimilation category, followed by those with East European background. Those with African backgrounds have the lowest share of assimilated and, together with individuals with Asian backgrounds, the highest shares in the separated category. The highest share of marginalized individuals is found among those with non-European (African, Asian and South American) and East European backgrounds. Note that the Non-European group also has the highest share

of individuals born abroad.<sup>11</sup> Figure A1 in the Appendix shows the same distribution based on the immigrant sub-sample. The distribution remains remarkably similar to that for the entire sample which is a likely consequence of the fact that our sub-sample of immigrants are characterized by a relatively low age at immigration and, by 1995, a relatively long duration of residence in Sweden.

--Figure 2 here--

Identity formation in general is one of the primary psychosocial tasks of adolescence and perceived as a relatively stable characteristic after the formative years of adolescence (Erikson, 1968). The formation of ethnic identity in this literature has been modelled as a progression, where an individual through a period of exploration, goes from the unexplored attitudes of childhood to an achieved ethnic identity at the end of adolescence (Phinney, 1989). Self-perceived identity can therefore be viewed as a relatively stable characteristic for adults who have long-term contact with the majority population. For immigrants, identity formation may be a more continuous on-going process as affinity to ones own background culture and to the majority culture is likely to be related to duration of residence in the host country. It is therefore difficult to argue that the acculturation identity stated in 1995 at age 23 is an exogenously determined characteristic. In this study, survey respondents are either born in Sweden with immigrant backgrounds or immigrated at a relatively early age implying a greater possibility that individual identity has developed into a reasonably stable characteristic by the age of 23. Nonetheless, there are a number of other characteristics and attributes correlated to acculturation identity that may be driving results in employment and income equations. Early labor market history, parental success in the labor market, residential segregation, size of the ethnic community and a number of other variables may be correlated with self-identification of acculturation identity. Many of these characteristics can be controlled for in estimation, others are unobservable. As such the coefficient estimates for respective acculturation identity in employment and income equations cannot be interpreted as causal effects but should rather be seen as conditional correlations.<sup>12</sup>

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<sup>11</sup> Ninety-five percent of respondents with non-European backgrounds were born abroad and immigrated before 1988. Forty-five percent of all respondents with foreign backgrounds are immigrants.

<sup>12</sup> Appropriate instrumental variable estimation allows for a causal interpretation of coefficient estimates. We argue however that the instruments commonly used in the literature such as marriage to a member of ones own ethnic group and participation in ethnically related clubs/activities are correlated to only one aspect of our acculturation measure, namely (ethnic) minority identity, and are therefore inappropriate as instruments for acculturation identity which incorporates both ethnic and majority identity.

When studying the cultural identity of immigrant minorities, it is important to understand that the majority society to a large degree decides on the identity alternatives available to minority groups. If the dominant group deems some minority cultures as more compatible with the majority culture than others, then identification to both the minority and majority culture will be facilitated for some groups and hampered for others. In other words, the cultural preferences or cultural familiarity of the dominant group influences the cost and benefits for different minority groups of identifying with the majority and minority culture. Within the Swedish context for example, a person from Finland who strongly identifies with his Finnish ethnicity is not the same as a Somali who strongly identifies with Somali culture. Due to longstanding cultural and labor market ties between Finland and Sweden the costs of “differing” culturally may be minimal for the Finn. The Somali on the other hand may in his adherence to Somali culture face a labor market sceptical towards hiring those perceived as culturally distant to the majority culture. At the same time, the benefits of adopting an assimilationist strategy may be limited if labor market discrimination based on phenotypic characteristics such as skin color is common. As such, estimations will also be done on sub-groups of the sample based on national background in order to determine if results vary for different groups of individuals.

Ethnic and majority identity may also vary over time. The costs and benefits of a Greek identity today is much different from the 1960s when the bulk of Greek immigration to Sweden occurred due to long-term interactions between this minority group and the Swedish majority population. Those with non-European backgrounds today have, relative to other migrant groups, on average a shorter duration of residence. At the same time, those with non-European backgrounds are to a larger degree “visible migrants” by virtue of skin color, atypical surnames and other attributes that may signal to employers the ethnic background of an individual but not his/her identification to the majority culture. These issues are important to bear in mind when interpreting coefficients measuring the correlation between respective acculturation identity and labor market outcomes.<sup>13</sup>

### **3.2 Empirical set-up**

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<sup>13</sup> The concept of identity has been studied in many disciplines and is naturally broad in scope. What is meant by identity and how well simple survey questions can capture this concept we leave up to others to determine.

The first stage of the empirical analysis examines the relationship between minority identity and majority identity. A linear relationship where higher (lower) levels of identification to the majority identity are correlated with lower (higher) levels of identification to the minority culture would lend support to the oppositional identity hypothesis while a more complex pattern indicates the need for a more flexible model of identity formation, such as the acculturation framework.

Initially, strength of minority identity and strength of majority identity are estimated separately in order to study the determinants of each and how they differ. In particular, and controlling for an extensive set of other explanatory variables, we focus on how the degree of minority identity affects strength of majority identity and vice versa. These estimations are based on information available up until 1995 only, in order to use only the information available prior to survey responses concerning identity in the 1995 survey. Due to the ordered categorization of both dependent variables, a number of ordered logit models are estimated controlling for differing sets of demographic, human capital and labor market related variables.<sup>14</sup> As there are relatively few individuals indicating no identification (“not at all”) to the minority culture, this group is merged in identity estimations with those indicating “little” identification to the minority culture. Likewise, the two lowest degrees of identification to the majority culture are also aggregated into one group.

The demographic characteristics included in estimation are gender (*female*), marital status (*married*), children, residence in a major urban area (*big city*), immigration status (*immigrant*) and national background.<sup>15</sup> National background is coded into seven categories based on own country of birth if born abroad or parents’ country of birth if born in Sweden. These categories are Finland, other Nordic countries (Norway and Denmark), Western Europe, Eastern Europe, Asia, Africa and South American.<sup>16</sup>

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<sup>14</sup> See Appendix for description of all control variables used in estimation.

<sup>15</sup> Marital status is a dummy variable coded as one if individuals are currently married or cohabitating and zero otherwise. Note that immigration status in this sample is a dummy variable equal to one if respondents immigrated to Sweden prior to 1988. As such all immigrants in the sample have a relatively early age at immigration.

<sup>16</sup> Information on country of birth (own or parents) is aggregated in the dataset by Statistics Sweden prohibiting a finer categorization of national background. Note that Turkey and Cyprus are coded as Asia in this dataset and that Central America and Caribbean countries sort under North America. Only three respondents have North American backgrounds and are therefore dropped from estimation. Individuals with mixed foreign backgrounds are also dropped from estimation (164 individuals).

Human capital in the identity equations is measured by two categorical variables indicating completion of upper secondary school (gymnasium or high school degree) and completion of at least one semester of university education. Both measures are based on survey information and used instead of the registered information on completed levels of education in order to pick up the variation in education between individuals who are approximately 23 years of age in 1995 and who may not have completed post-secondary school educations. In addition, language proficiency in the majority Swedish language is controlled for based on a number of survey questions measuring self-observed proficiency in comprehension, speaking, reading and writing.<sup>17</sup> A composite measure of Swedish language proficiency is created grouping non-native speakers into three levels of proficiency: poor, good and excellent.<sup>18</sup>

Present and prior labor market success may also influence self-perceived strength of identity (both minority and majority identity). As such various measures of labor market performance are included in estimation. Three categorical variables are defined indicating whether or not the individual was employed in each of the three years prior to the 1995 survey. In addition, labor market status in 1995 is controlled for broken down into five categories indicating whether the individual was primarily employed, employed but temporarily absent, in a labor market program, unemployed or out of the labor force due to, for example, educational purposes, military service or parental leave. Finally, monthly wage at the time of the survey is included in estimation.

A measure of expectations about future labor market success is also included in estimation. Expectations are based on a survey question asking individuals to judge (in 1995) their chances of finding regular employment within the next four to five years and are coded into four groups (excellent, good, fair, poor). Expectations aim to capture a realm of unobservable characteristics that may influence self-observed identification, among these are self-perceived discrimination, motivation, intelligence, skills, talent and work capacity (the latter factors are often summarized in the literature as ability).

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<sup>17</sup> Language proficiency is self-observed and based on the following survey questions asked to those who indicate speaking a non-Swedish language at home: “How good is your Swedish for: understanding news and discussions? presenting your ideas at meetings? telephone contact with public authorities? reading literature? writing job applications?”

<sup>18</sup> Note that 15 respondents with immigrant backgrounds indicate Swedish as their only language. These individuals are coded into the group with excellent Swedish language proficiency.

The second stage of the analysis examines how labor market outcomes are correlated to acculturation identity, that is to say, to our composite measure indicating level of identification to both the majority and minority culture. Using the acculturation identities, the employment and income equations are therefore able to examine the influence of minority (majority) identity given both high and low levels of majority (minority) identity. Employment and income equations are estimated based on the survey data from 1995 as well as register data for the years 1995-2002. Variations of the following basic model are estimated:

$$y_{it} = AI_i\beta_1 + X_{it}\beta_2 + \alpha_i + \varepsilon_{it}$$

$y_{it}$  is the outcome variable for individual  $i$  at time  $t$  (employment status or log labor income),  $AI$  is the acculturation identity of individual  $i$  (assimilated, integrated, separated or marginalized),  $X_{it}$  is a matrix of control variables,  $\alpha_i$  is the unobserved individual effect and  $\varepsilon_{it}$  denotes the idiosyncratic error term. Employment and income equations are estimated by pooled OLS estimation with standard errors corrected for any unknown form of heteroscedasticity and serial correlation.<sup>19</sup> All estimations also control for common time effects.

Employment status is based on register data from the LOUISE data set and is defined as a dichotomous variable equal to one if individuals have worked at least one hour or have positive labor income during a measurement week in November of any given year and zero otherwise. Estimated coefficients for acculturation identity in employment equations measure the change in employment probability relative to the reference group (assimilated) of belonging to one of the other acculturation identities, all else equal. Income is measured as gross labor income and/or gross income from business activities.<sup>20</sup> Income equations are log-linear and therefore measure the percentage income difference of belonging to each acculturation identity relative to the reference group (assimilated) for those with positive incomes.

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<sup>19</sup> More specifically standard errors are corrected using the robust variance matrix suggested by Wooldridge (Wooldridge 2006). In practice, the command *robust cluster* is used in Stata, specifying standard errors that are asymptotically robust to both heteroskedasticity and serial correlation.

<sup>20</sup> Included in the measure are a number of work-related insurance benefits such as compensation for sick leave and parental leave.



Control variables in employment and income equations include a number of the variables described above for the identity equations. Education, however, is now measured as the highest completed level of education based on register data from LOUISE. Level of education is defined at the one-digit level, coding completed education into four basic levels; completion of compulsory school (9-10 years), upper-secondary school (gymnasium or high school), short post-secondary school and university degree.

Descriptive statistics are presented in Table 1 by acculturation identity. Seen as a proportion of the entire sample, the majority of the respondents are coded as integrated. Similar to results found in Constant *et al* (2006), very few in the sample express no identification at all, only 3.2 percent of the sample self-identify as marginalized. Contrary to Constant *et al* (2006), relatively few in our study indicate being separated which is again a likely consequence of the fact that our sample of immigrants arrived at an early age. Women are underrepresented and immigrants over-represented in the categories separated and marginalized, only 27 percent of the marginalized are for example, female while 70 percent of the separated are immigrants. In terms of employment, the integrated and assimilated have the similar mean employment levels at higher levels than that indicated for the separated and marginalized. Mean income levels follow the same pattern, the integrated and assimilated have the highest levels (assimilated slightly higher than integrated), while separated and marginalized individuals have similar but relatively lower mean income levels in 1995.

Other interesting differences include that the integrated appear to have the highest education levels. Register data indicates that a relatively large proportion of those that are integrated have post-secondary schooling and survey data confirm that a larger proportion of the integrated have at least one term of university education at the time of the survey than that noted for the other acculturation identities. The assimilated however, have the highest (self-perceived) levels of Swedish language proficiency closely followed by the integrated. Finally, the integrated and the separated engage to a relatively large degree in so-called ethnic activities (religious services, cultural activities and ethnic clubs where the home language is spoken) and, to a larger degree, use their home language in contacts with others. Both of these acculturation identities are associated with a high affinity for the (ethnic) minority culture indicating a strong correlation between these characteristics and minority identity.

-- Table 1 here --

## 4 Empirical Results

### 4.1 Determinants of Identity

Initially, the strength of identification to one's ethnic minority culture and, separately, to the Swedish majority culture is estimated using only the information available in 1995, the year survey responses were recorded. As each of the dependent variables is categorical and ordered (three levels), with responses ranging from not at all/little to completely, ordered logit models are estimated.

Table 2, column 1, presents results for estimation of the probability of having a strong minority identity focusing on the estimated coefficients for the impact of strength of majority identity, all else equal. Presented results are based on estimations that also control for demographic characteristics, national background, current (1995) and prior labor market status, expectations of future employability and Swedish language proficiency.<sup>21</sup> Interestingly, no systematic association is found between the degree of identification with the Swedish majority culture and the degree of identification with the minority culture. Those that partially or completely identify with the majority culture do not systematically differ in strength of minority identity from those with no/little minority identity. This result implies no correlation between strength of minority and strength of majority identity, at odds with the theory of oppositional identities.<sup>22</sup>

-- Table 2 here --

Column 2 of Table 2 shows instead the estimated coefficients for strength of minority identity in estimation of strength of majority identity.<sup>23</sup> Contrary to the above results, a higher degree of minority identity is associated with a lower degree of majority identity. Those who partially or completely identify with their minority culture are significantly and negatively associated with a stronger majority identity in comparison to the reference group (little or no affinity to the minority culture). The relationship, however, is not linear. Instead, strength of majority

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<sup>21</sup> See Table A2 in Appendix for full results of the estimated model as well as results by gender.

<sup>22</sup> Results for strength of minority identity are robust to estimation of numerous alternative model specifications.

<sup>23</sup> See Table A3 for full results of the estimated model as well as results by gender.

identity appears to be somewhat u-shaped with respect to strength of minority identity.<sup>24</sup> The fact that the association between minority and majority identity varies according to which form of identity is being modelled suggests that the two processes are not symmetric and cannot be treated as mirror images of one another.

Full results for the above estimations are shown in Table A2–A3. Notable results include that women are more likely to have a strong minority and strong majority identity than men. In other words, women identify to a larger degree than men to both their culture of origin and to the majority culture. This is contrary to results noted in Constant *et al* (2006a) who find that women are less attached to the host country than men, i.e., have a weaker majority identity. However, the sample used in this study differs in important ways from that used by Constant *et al*.<sup>25</sup> Immigrant status has no effect on either strength of minority or majority identity which again is a likely consequence of the sample estimated on. The coefficients for marital status, children and residence in a major urban area are all insignificantly correlated with identity (either form).

National background however, matters. Relative to individuals with Finnish backgrounds, those with other Nordic backgrounds are associated with significantly stronger minority identity and those with East European backgrounds with (weakly) significantly lower minority identity. In terms of strength of majority identity and in comparison to those with Finnish backgrounds, all other groups with the exception of other Nordic are less likely to identify to the majority culture. This result is perhaps not unexpected due to the close cultural ties between Sweden and the rest of Scandinavia.

The education variables indicate that having attended upper-secondary school is positively associated with stronger ethnic identity, a result driven by the positive association found between upper-secondary school and strength of minority identity for women. For men, having some university education is also positively associated with stronger (ethnic) minority identity. Education is found to be uncorrelated to strength of majority identity.

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<sup>24</sup> Note that the coefficient for identifying completely with the minority culture is significantly larger than the coefficient for partial identification to the minority culture.

<sup>25</sup> Constant *et al* (2006a) is based on first-generation immigrants between the ages of 18 and 80 with an average age at immigration of 22. Our study is based on a cohort of individuals with the same age (23 in 1995) who if born abroad immigrated to Sweden before the age of 16.

Contrary to expectations concerning a link between prior labor market outcomes and self-assessed strength of (ethnic) minority identity, past and current labor market status is not generally found to be systematically associated with minority identity.<sup>26</sup> Neither is labor market status found, in general, to be associated with strength of majority identity.<sup>27</sup> One implication of these results is that the problem of simultaneity between identity and labor market success may not be as severe as initially thought

Other results include that expectations concerning future employment are insignificantly associated with strength of minority identity but positively associated with identification to the majority culture. Interestingly, results for men indicate that high levels of Swedish language proficiency, is associated with stronger minority identity. Swedish language proficiency is otherwise positively associated with strength of majority identity.<sup>28</sup>

The results presented in this section support modelling of identity in a two-dimensional acculturation framework in order to allow for a more flexible non-linear relationship between strength of affinity to the minority and majority culture. The next section examines the correlation between acculturation identities and labor market outcomes.

#### **4.2 Acculturation Identity and the Probability of Being Employed**

The section explores the correlation between acculturation identity and employment. Using register data on employment for the years 1995 to 2002, pooled linear probability models are estimated with standard errors corrected for any unknown form of heteroscedasticity and serial correlation. Reported results are based on estimation of the most extensive model specification including controls for a number of demographic variables, education, national background, common time effects, labor market status in/prior to 1995 and expectations (in 1995) about future employability. Employment equations are estimated for the entire cohort,

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<sup>26</sup> Prior employment in 1992 and 1993 (dummy variables equal to one if the respondent was employed at any time during the year and zero otherwise) are found to be negatively (1992) or positively (1993) associated with strength of minority identity (for men). For women, being in a labor market program is found to be negatively associated with strength of minority identity in comparison to being employed in 1995. No other measures for past or current (1995) labor market status are found to be significantly associated to strength of minority identity.

<sup>27</sup> Results for men indicate that relative to those employed at the time of the survey (1995), unemployed men are associated with a significantly stronger majority identity. This is perhaps counter-intuitive but may indicate a sense of belonging to the system, as the unemployed must register with the Swedish Employment Agency in order to receive unemployment benefits. For women, all measures for current labor market status (employed but temporarily absent, in labor programs, unemployed and out of the labor force) are significantly negatively associated with strength of majority identity in comparison to being employed.

<sup>28</sup> Estimation of the determinants for respective acculturation identity has also been carried out. Results are available from authors upon request.

separately by gender and separately by (aggregated) national background.<sup>29</sup> See Appendix for presentation of full results.

Table 3 shows results for acculturation identity in estimation of the probability of being employed 1995-2002. Results in column one for the entire sample indicate that in comparison to the assimilated, the integrated have only slightly lower (3 percentage points) and weakly significant employment probabilities. The separated have significantly lower employment probabilities (6 percentage points) while the marginalized insignificantly differ from the reference group. Note that the marginalized are a relatively small group in the sample estimated upon.<sup>30</sup> Separate estimation by gender indicates that systematic differences between acculturation identity and employment probabilities are a male phenomenon. No significant differences in employment probabilities are found for women in different acculturation identities.<sup>31</sup>

The results presented in Table 3 are averages for the period from 1995 to 2002 when the individuals in the sample are between 23 and 30 years of age. During this period, many are still engaged in post-secondary schooling. This implies that students are coded as not employed which may affect the relationship between acculturation identity and employment if post-secondary schooling is correlated with identity. The descriptive statistics in Table 1 indicate that this may be the case.<sup>32</sup> Re-estimation of the employment equations for a sample of non-students indicates no significant differences in employment probabilities between the integrated and the assimilated (see Table A4 in Appendix).<sup>33</sup>

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<sup>29</sup> In separate estimations by national background, nationality is aggregated to three regions; Nordic, European and Non-European. This is done in order to avoid problems related to small sample sizes and to explore if general trends vary between broadly defined origin groups.

<sup>30</sup> The effect of a marginalized identity on employment varies by national background. Results by national background are presented in Table 4.

<sup>31</sup> Alternative employment equations controlling for strength of (ethnic) minority identity indicate that those that completely identify to their minority culture are associated with significantly lower employment probabilities than those that do not at all identify with their minority cultures. Insignificant differences are found for those that identify a little or partially to their minority cultures. Employment equations controlling for strength of majority identity indicate that those that completely identify to the majority culture are associated with weakly significant higher employment probabilities than the reference group (no identification to the majority culture). Results available upon request.

<sup>32</sup> In 1995, 23 percent of the integrated have studied at least one term at the university compared to 16 percent of the assimilated. For the separated and the marginalized, the corresponding shares are 19 and 9 percent respectively.

<sup>33</sup> Students are identified by receipt of national student loans while not being registered as unemployed.

-- Table 3 here --

Other results from employment equations (see Table A5 in Appendix) include that women are less likely to be employed than men while immigrants do not significantly differ from those born in Sweden with immigrant backgrounds. Systematic differences between differing national backgrounds are however found. Relative to the Finnish, all other nationalities experience a significant employment penalty, *ceteris paribus*, with the exception of Africans who insignificantly differ from the reference group.<sup>34</sup> Being unemployed or out of the labor market at the time of the survey in 1995 is associated with significantly lower employment probabilities than being employed at that time. Finally, expectations about future employability are positively correlated with employment probabilities.

Table 4 shows results for separate estimation by gender and (aggregated) national background. Integrated Nordic men have significantly lower employment probabilities than assimilated Nordic men and, perhaps surprisingly, marginalized Nordic men have significantly higher employment probabilities. Among European men, the separated have significantly lower employment probabilities than the assimilated. Results for Non-European men, however, indicate no systematic variation between acculturation identities and employment probabilities. Given the negative employment probabilities found for this group, it appears that the correlation between national background and employment is stronger than that between identity and employment. A tentative conclusion is that an integrated or assimilated identity cannot overcome employment penalties associated with national background and perhaps in this case, with being visible minorities. Note again that the sample estimated upon consists of individuals who are either born in Sweden or immigrated at an early age and who therefore have primarily domestic education and experience.<sup>35</sup> Consistent

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<sup>34</sup> Results for women show that relative to the Finnish reference group, only West European and Asian women have significantly lower employment probabilities, all else equal.

<sup>35</sup> A surprising result in employment equations however, is that those with African backgrounds do not significantly differ from the Finnish in employment probabilities. This group is however relatively small in number in the cohort estimated upon (87 individuals have African backgrounds). Numerous studies on Sweden show that non-Europeans as a group have large employment gaps to natives (for studies on employment differentials between natives and immigrants, see Arai *et al.*, (2000a, 2000b), Ekberg (1991), Nekby (2003), Vilhelmsson (2002) and Wadensjö (1997). For studies on natives with immigrant backgrounds in Sweden, see Behtoui (2002, 2006), Ekberg & Rooth (2003), Hammarstedt & Palme (2004), Vilhelmsson (2002) and Österberg (2000). African men are generally found to have the largest employment gap to natives (see Rapport Integration, 2005). Estimation on our cohort shows that South American men and Asians in general have significant employment disparities to the Finnish reference group, but not those with African backgrounds.

with earlier results, no systematic variation between acculturation identities and employment probabilities are found for women within broadly defined national background groups.

-- Table 4 here --

The results reported in this section indicate, contrary to oppositional identity theories, that strength of minority identity is not as important for employment outcomes as strength of majority identity. Relatively small, but significant employment disparities are found between the integrated and the assimilated that have in common a strong attachment to the majority culture but varying attachment to minority cultures. In a similar manner, since employment probabilities do not differ between the marginalized and the separated identity, a strong minority identity is found to neither increase nor decrease the probability of being employed for individuals with low attachment to the Swedish culture. Another notable result is that there are no systematic effects of identity on employment outcomes for women regardless of national background or for non-European men.

#### **4.3 Acculturation Identity and Income**

In the next stage of the analysis, the correlation between identity and income outcomes is estimated for those with positive incomes i.e., those indicating some form of employment during any given year. Pooled OLS estimates on log income are estimated controlling for acculturation identity and the same set of control variables used in employment equations for the years 1995 to 2002. As above, income equations are estimated for the entire cohort, by gender and by (aggregated) national background.

-- Table 5 here --

Results presented in Table 5 show no significant differences in income between the assimilated or the integrated in estimation on the entire cohort.<sup>36</sup> Only the marginalized appear to have significantly lower (17 percent lower) income levels. Income equations estimated by gender, show that integrated men have significantly lower income levels than

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<sup>36</sup> Separate income equations controlling for strength of (ethnic) minority identity show no systematic correlation between strength of minority identity and income. Estimated income equations controlling for strength of majority identity, however, clearly show that stronger identification to the majority culture is associated with higher income levels for those successful in procuring some form of employment. Results available upon request.

assimilated men (9 percent lower) as do the marginalized (21 percent lower). No systematic differences in income by acculturation identity are found for women.<sup>37</sup>

Estimation results by gender and (aggregated) national background are presented in Table 6. Integrated Nordic men are significantly and clearly associated with lower income levels than assimilated Nordic men, as are separated European men from assimilated European men. Finally, marginalized non-European men are found to be significantly associated with lower income levels in comparison to assimilated non-European men. For the first time, results also indicate some variation between identity and income outcomes for women, marginalized European women are namely associated with significantly lower income levels than assimilated European women.

-- Table 6 here --

## **4 Conclusions**

The purpose of this study has been to investigate the labor market implications of varying identification to ethnic minority cultures and to the Swedish majority culture for individuals with foreign backgrounds. Novel for this study is the introduction of an acculturation framework to study these effects, allowing identity to be modeled according to strength of both types of identity (minority and majority). Initial logit estimations confirm a complex relationship between minority and majority identity, showing clearly that the two processes are not symmetric and cannot be seen as mirror images of each other.

The results presented in this paper show that what matters for labor market outcomes is strength of identification with the majority culture regardless of strength of ethnic identity. Only small and weakly significant differences are found, on average, between the assimilated and the integrated in employment equations and no differences in income equations. The integrated and the assimilated have in common a strong attachment to the majority culture but varying attachment to ethnic minority cultures. These results imply that a strong ethnic minority identity is not detrimental for labor market outcomes if simultaneously combined with a strong identification to the majority culture. Likewise, results for those with a weak attachment to the Swedish majority culture confirm that a strong minority identity has no

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<sup>37</sup> See Table A6 in Appendix for full results of income estimations.



importance for employment outcomes as shown by insignificant differences in employment between the separated and the marginalized.

Another notable result is that there is no systematic variation between identity and labor market outcomes for women. Neither is there any systematic variation between acculturation identities and employment outcomes for non-European men. A tentative conclusion is that an integrated or assimilated identity cannot overcome employment penalties associated with national background and perhaps especially, with being a visible minority.

These results provide one counterexample to studies based on the premise of oppositional identities, i.e., that identity is a linear process and that a strong minority identity goes hand in hand with a weak majority identity. Our results show that given a strong identification to the majority culture, a minority identity is of little to no importance for labor market outcomes. This result has potentially important implications for post-immigration policies indicating that integrationist policies may be as beneficial as assimilation policies in terms of labor market outcomes while simultaneously more beneficial in terms of individual well-being, as indicated by previous psychological studies on acculturation.

Our results are based on a single cohort of students with immigrant backgrounds with certain special characteristics, namely that those born abroad who immigrated to Sweden did so before the age of 16 and before 1988 implying a relatively long duration of residence in the host country. As such our sample is not representative of the composition of immigrants today. To what degree the results reported here extend to first generation immigrants with shorter duration of stay and to other more narrowly defined ethnic groups is a question for further research.

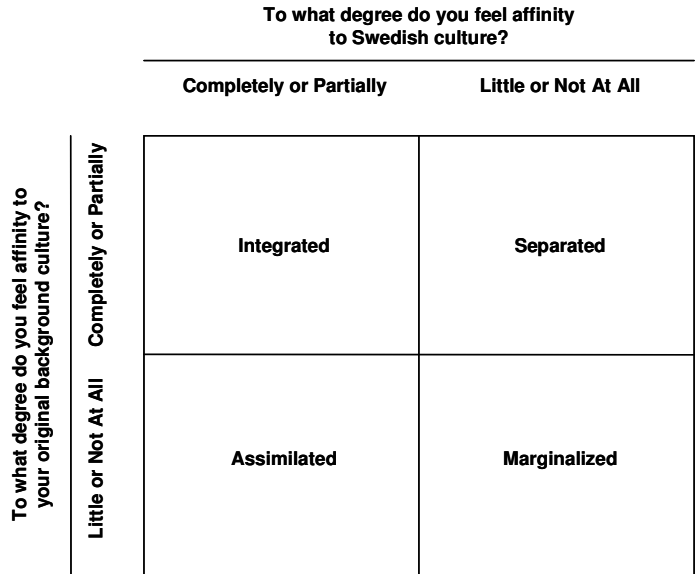
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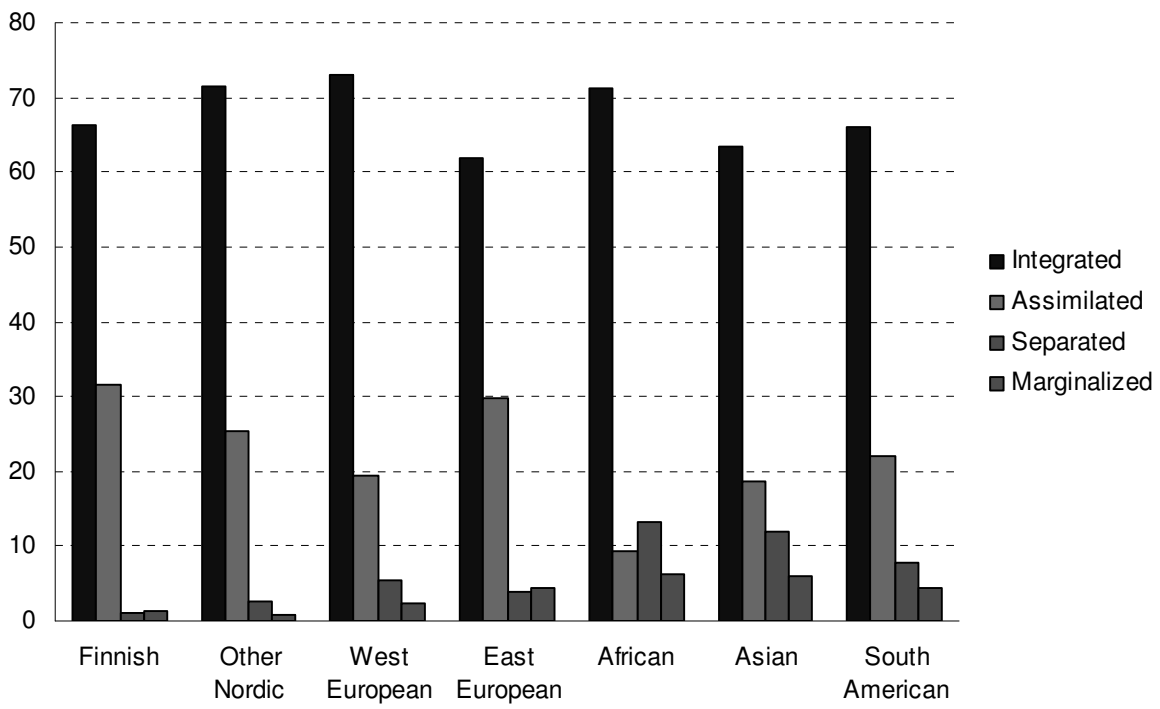
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**Figure 1: The Construction of Acculturation Identity**



**Figure 2: Distribution of Acculturation Identities, by (Aggregated) National Background**



**Table 1: Sample Statistics, By Acculturation Identity\***

	<b>Integrated</b>	<b>Assimilated</b>	<b>Separated</b>	<b>Marginalized</b>
Employed Nov 1995 (register data)	0.54	0.55	0.40	0.42
Labor income Nov 1995 (register data) **	77	81	53	54
Female	0.51	0.48	0.44	0.27
Immigrant	0.44	0.38	0.70	0.53
Age	23.1	23.1	23.2	23.2
Big city	0.31	0.30	0.44	0.53
Married	0.44	0.43	0.56	0.48
Children	0.26	0.25	0.31	0.34
<i>Education</i>				
<i>..from survey response</i>				
Completed upper secondary	0.76	0.68	0.64	0.60
At least one term at university	0.23	0.16	0.19	0.09
<i>..from register data</i>				
Completion of compulsory school (9-10 years)	17.2	21.6	26.0	28.9
Upper-secondary school (gymnasium or high school)	60.3	66.8	59.8	61.8
Short post-secondary school	21.1	10.9	13.7	8.5
University degree	1.5	0.7	0.6	0.8
	100%	100%	100%	100%
<i>Labor market situation</i>				
Been employed 1992	0.47	0.48	0.40	0.45
Been employed 1993	0.42	0.37	0.36	0.41
Been employed 1994	0.45	0.47	0.38	0.45
Employed at time of survey	0.45	0.46	0.38	0.39
..monthly wage if employed	9409 (269)	10371 (274)	8603 (624)	5769 (1507)
Expectations of permanent job in the coming 4-5 years				
- excellent	30.9	29.9	17.4	32.0
- good	43.3	42.8	33.8	21.1
- fair	20.7	20.4	32.9	32.7
- poor	5.2	6.9	15.9	14.2
	100%	100%	100%	100%
<i>Ethnic activities and language</i>				
Engaging in ethnic activities	0.31	0.10	0.56	0.13
Using home language in contacts				
- with persons in older generation	0.95	0.84	0.99	0.91
- with persons in same generation	0.72	0.37	0.88	0.71
Swedish skills				
- excellent	69.4	76.1	37.8	44.4
- fair	22.4	15.5	34.0	29.7
- poor	8.1	8.3	28.0	26.0
	100%	100%	100%	100%
Share of sample (weighted)	0.656	0.264	0.048	0.032

Standard errors in parantheses

\* Reported means and frequencies are calculated for the year 1995 and are weighted in order to represent the 1988 cohort of students

\*\* Reported in SEK 1000

**Table 2: Strength of Identity.** Ordered logit estimation, 1995.

	(1)	(2)
	<b>The probability of:</b>	
	<b>Strong minority identity</b>	<b>Strong majority identity</b>
<b>Majority Identity</b> (ref: little or not at all):		
Partially	0.275 (0.195)	-- --
Completely	-0.283 (0.219)	-- --
<b>Minority Identity</b> (ref: little or not at all):		
Partially	-- --	-1.027*** (0.150)
Completely	-- --	-0.549*** (0.174)
Observations	3089	3089
Robust standard errors in parentheses		
* significant at 10%; ** significant at 5%; *** significant at 1%		

Note: Estimations above also control for gender, marital status, children, residence, human capital, national background, current/prior labor market status, language proficiency, and expectations.

**Table 3: The Probability of Being Employed Controlling for Acculturation Identity.** Pooled linear probability Models (1995-2002).

	All	Men	Women
<b>Acculturation Identity</b> (ref: Assimilated):			
Integrated	-0.032* (0.017)	-0.038* (0.019)	-0.025 (0.025)
Separated	-0.064** (0.030)	-0.079** (0.037)	-0.050 (0.049)
Marginalized	-0.052 (0.041)	-0.077 (0.049)	-0.009 (0.054)
Observations	24043	12029	12014
R-squared	0.16	0.18	0.16
Robust standard errors in parentheses			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Note: Estimations above also control for gender, marital status, children, residence, human capital, national background, prior labor market status, language proficiency, expectations and common time effects. Standard errors corrected for any unknown form of heteroscedasticity and serial correlation.

**Table 4: The Probability of Being Employed Controlling for Acculturation Identity, by Gender and (Aggregated) National Background.** Pooled Linear Probability Models (1995-2002).

<b>Men</b>			
	(1)	(2)	(3)
	<b>Nordic</b>	<b>European</b>	<b>Non-European</b>
<b>Acculturation Identity (ref: Assimilated):</b>			
Integrated	-0.049* (0.029)	-0.043 (0.033)	-0.019 (0.032)
Separated	-0.082 (0.090)	-0.168*** (0.057)	-0.027 (0.053)
Marginalized	0.131** (0.058)	-0.130 (0.080)	-0.085 (0.063)
Observations	4531	3408	4090
R-squared	0.20	0.20	0.15
<b>Women</b>			
	(1)	(2)	(3)
	<b>Nordic</b>	<b>European</b>	<b>Non-European</b>
<b>Acculturation Identity (ref: Assimilated):</b>			
Integrated	-0.011 (0.031)	-0.033 (0.037)	-0.001 (0.047)
Separated	-0.115 (0.087)	-0.107 (0.120)	0.013 (0.061)
Marginalized	0.046 (0.102)	-0.183 (0.129)	0.043 (0.076)
Observations	5055	3402	3557
R-squared	0.18	0.19	0.16
Robust standard errors in parentheses			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Note: Estimations above also control for gender, marital status, children, residence, human capital, national background, prior labor market status, language proficiency, expectations and common time effects. Standard errors corrected for any unknown form of heteroscedasticity and serial correlation.



**Table 5: Income Regressions Controlling for Acculturation Identity.** Pooled OLS (1995-2002).

	All	Men	Women
<b>Acculturation Identity</b> (ref: Assimilated):			
Integrated	-0.062 (0.041)	-0.094** (0.044)	-0.010 (0.061)
Separated	-0.064 (0.079)	-0.108 (0.098)	0.019 (0.128)
Marginalized	-0.174* (0.099)	-0.214* (0.125)	-0.034 (0.137)
Observations	20155	10060	10095
R-squared	0.19	0.22	0.18

Robust standard errors in parentheses  
\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Note: The dependent variable is log income. Estimations also control for gender, marital status, children, residence, human capital, national background, prior labor market status, language proficiency, expectations and common time effects. Standard errors corrected for any unknown form of heteroscedasticity and serial correlation.

**Table 6: Income Regressions Controlling for Acculturation Identity, by Gender and (Aggregated) National Background.** Pooled OLS (1995-2002).

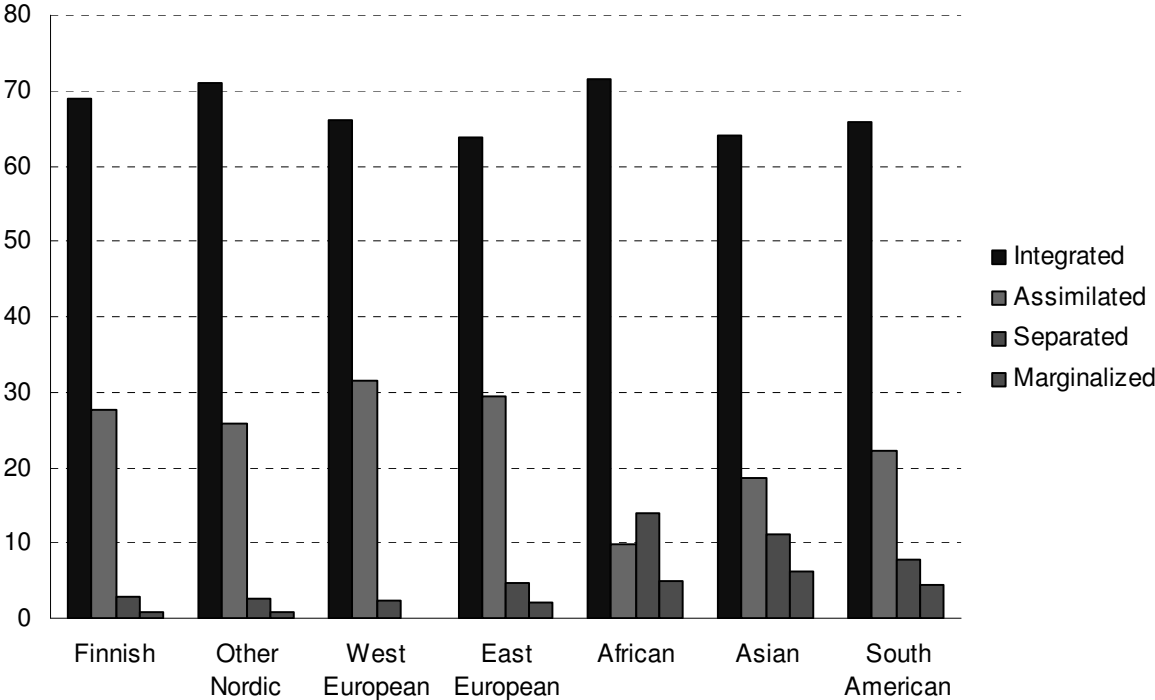
	Men		
	(1) Nordic	(2) European	(3) Non-European
<b>Acculturation Identity</b> (ref: Assimilated):			
Integrated	-0.156*** (0.055)	-0.091 (0.089)	-0.032 (0.092)
Separated	-0.050 (0.189)	-0.488** (0.191)	0.124 (0.135)
Marginalized	-0.082 (0.157)	-0.095 (0.201)	-0.368* (0.204)
Observations	3984	2861	3215
R-squared	0.23	0.23	0.19
	Women		
	(1) Nordic	(2) European	(3) Non-European
<b>Acculturation Identity</b> (ref: Assimilated):			
Integrated	-0.004 (0.061)	-0.042 (0.075)	-0.002 (0.193)
Separated	-0.173 (0.419)	-0.057 (0.200)	0.078 (0.217)
Marginalized	-0.065 (0.177)	-0.671* (0.370)	0.151 (0.242)
Observations	4461	2846	2788
R-squared	0.20	0.22	0.18

Robust standard errors in parentheses  
\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Note: Estimations above also control for gender, marital status, children, residence, human capital, national background, prior labor market status, language proficiency, expectations and common time effects. Standard errors corrected for any unknown form of heteroscedasticity and serial correlation.

**Appendix:**

**Figure A1: Distribution of Acculturation Identities, by (Aggregated) National Background.**



## Table A1: Description of Control Variables

### *Demographic characteristics*

**Female**- dummy variable equal 1 for women, 0 for men.

**Immigrant**- dummy variable equal 1 if immigrated to Sweden before 1988, 0 for born in Sweden.

**Married**- dummy variable equal 1 if married or cohabitating, 0 otherwise.

**Children**; dummy variable equal 1 if having at least one child under 18, 0 otherwise.

**Major Urban**- dummy variable equal 1 if residing in a major urban area, 0 otherwise.

**Ethnic background**- category variable with seven categories based on own country of birth if born abroad or parent's country of birth if born in Sweden: Finland, other Nordic countries (Norway and Denmark), Western Europe, Eastern Europe, Asia, Africa and South American.

### *Human capital*

**Upper Secondary**- dummy variable equal 1 if having completed upper secondary education before 1995, 0 otherwise (survey information).

**Some University**- dummy variable equal 1 if having studied at least one term at university before 1995, 0 otherwise (survey information).

**Education** - category variable indicating completion of 4 levels of education: compulsory, upper-secondary, post-secondary (less than two years), university.

**Swedish Language Proficiency**- category variable measuring self-observed proficiency in comprehension, speaking, reading and writing, taking the values Poor, Good and Excellent (survey information).

### *Labor market situation*

**Employed 1992, Employed 1993, Employed 1994** - dummy variables equal to 1 if employed in 1992, 1993 and 1994 respectively, 0 otherwise (survey information).

**Current labor market status** - employment status at the time of the 1995 survey: Employed, Employed – temporary absent, Labor Program, Unemployed and Out of Labor Force (survey information).

**Income 95**- monthly wage at the time of the 1995 survey, if employed (survey information).

**Expectations of Future Employability**- category variable answering the question “What are your chances of getting a permanent job in the next 4-5 years?”, taking the values Poor, Fair, Good and Excellent (survey information).

### *Ethnic capital*

**Ethnic activities**- dummy variable equal 1 if an individual engages in ethnic activities, 0 otherwise (survey information).

**Home Language – Elders** - dummy variable equal 1 if home language often or sometimes is used in interactions with parents, grandparents and other older persons, 0 otherwise (survey information).

**Home Language – Peers** - dummy variable equal 1 if home language often or sometimes is used in interactions with brothers, sisters and friends in the same generation, 0 otherwise (survey information).

**Table A2: Strength of Minority Identity. Ordered logit estimation (1995).**

	(1)	(2)	(3)
	All	Men	Women
Female	0.260** (0.114)		
Immigrant	0.103 (0.116)	0.175 (0.153)	0.034 (0.170)
Married	0.025 (0.124)	-0.068 (0.158)	0.132 (0.188)
Children	0.012 (0.152)	0.064 (0.204)	0.007 (0.195)
Major Urban	0.010 (0.131)	-0.053 (0.184)	0.128 (0.153)
Upper-secondary school	0.317** (0.134)	0.084 (0.179)	0.515*** (0.188)
Some university	0.204 (0.157)	0.340* (0.199)	0.033 (0.215)
<b>National background (ref: Finnish):</b>			
Other Nordic	0.631*** (0.222)	0.710** (0.316)	0.583* (0.314)
West European	0.467 (0.316)	0.417 (0.284)	0.419 (0.460)
East European	-0.280* (0.167)	-0.070 (0.233)	-0.525** (0.232)
African	0.184 (0.206)	0.229 (0.304)	0.089 (0.300)
Asian	-0.098 (0.153)	0.033 (0.204)	-0.366* (0.219)
South American	-0.241 (0.162)	-0.095 (0.230)	-0.507** (0.232)
<b>Current (1995) labor market status (ref: employed):</b>			
Employed, temp. absent	0.675 (0.627)	0.133 (0.457)	1.055 (0.851)
Labor program	-0.297 (0.261)	-0.019 (0.290)	-0.763* (0.423)
Unemployed	0.112 (0.208)	0.110 (0.258)	0.152 (0.294)
Out of labor force	-0.094 (0.201)	0.085 (0.243)	-0.298 (0.256)
Income 1995	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
Employed 1992	-0.029 (0.157)	-0.332** (0.163)	0.241 (0.240)
Employed 1993	0.347 (0.232)	0.604*** (0.192)	0.016 (0.382)
Employed 1994	-0.118 (0.191)	-0.143 (0.236)	-0.098 (0.260)
<b>Expectations of future employability (ref: poor):</b>			
Fair	-0.010 (0.182)	-0.275 (0.255)	0.173 (0.258)
Good	0.042 (0.173)	-0.374 (0.250)	0.350 (0.227)
Excellent	0.223 (0.230)	-0.221 (0.284)	0.602* (0.336)
<b>Identification to majority culture (ref: little or not at all):</b>			
Partially	0.275 (0.195)	0.575** (0.248)	-0.215 (0.263)
Completely	-0.283 (0.219)	0.120 (0.283)	-0.916*** (0.298)
<b>Swedish language proficiency (ref: poor):</b>			
Good	0.359** (0.153)	0.494** (0.195)	0.242 (0.251)
Excellent	0.157 (0.142)	0.181 (0.177)	0.213 (0.221)
Observations	3088	1545	1543
Robust standard errors in parentheses			
* significant at 10%; ** significant at 5%; *** significant at 1%			

**Table A3: Strength of Majority Identity. Ordered logit estimation (1995).**

	(1)	(2)	(3)
	All	Men	Women
Female	0.381*** (0.117)		
Immigrant	-0.168 (0.119)	-0.190 (0.162)	-0.149 (0.168)
Married	-0.136 (0.126)	-0.213 (0.164)	-0.034 (0.174)
Children	-0.112 (0.152)	0.080 (0.215)	-0.311 (0.206)
Major Urban	-0.074 (0.119)	-0.197 (0.156)	0.082 (0.165)
Upper secondary	0.122 (0.128)	0.168 (0.173)	0.100 (0.178)
Some University	0.089 (0.170)	0.054 (0.216)	0.083 (0.229)
<b>National background (ref: Finnish):</b>			
Nordic	0.101 (0.199)	0.260 (0.297)	-0.088 (0.277)
West European	-1.170*** (0.296)	-1.095*** (0.310)	-1.218*** (0.418)
East European	-0.768*** (0.167)	-0.625*** (0.236)	-1.015*** (0.216)
African	-1.365*** (0.276)	-0.849** (0.348)	-2.045*** (0.433)
Asian	-1.477*** (0.163)	-1.218*** (0.204)	-1.859*** (0.247)
South American	-1.108*** (0.192)	-0.836*** (0.229)	-1.522*** (0.324)
<b>Current (1995) labor market status (ref: employed):</b>			
Empl. temp absent	-0.878 (0.538)	-0.111 (0.574)	-1.352** (0.636)
Labor program	-0.164 (0.355)	0.448 (0.295)	-0.988* (0.572)
Unemployed	0.048 (0.235)	0.592* (0.315)	-0.581* (0.330)
Out of Labor Force	-0.268 (0.216)	0.110 (0.281)	-0.672** (0.286)
Income 1995	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
Employed 1992	0.127 (0.121)	0.075 (0.172)	0.177 (0.167)
Employed 1993	-0.117 (0.134)	-0.055 (0.191)	-0.204 (0.190)
Employed 1994	-0.078 (0.142)	-0.006 (0.195)	-0.138 (0.199)
<b>Expectations of future employability (ref: poor):</b>			
Fair	0.190 (0.230)	0.004 (0.305)	0.379 (0.321)
Good	0.584** (0.227)	0.583* (0.301)	0.651** (0.315)
Excellent	0.760*** (0.265)	0.739** (0.341)	0.784** (0.355)
<b>Ethnic Identity (ref: little or not at all):</b>			
Partially	-1.027*** (0.150)	-0.648*** (0.198)	-1.578*** (0.209)
Completely	-0.549*** (0.174)	-0.198 (0.225)	-1.027*** (0.242)
<b>Swedish language proficiency (ref: poor):</b>			
Good	0.211 (0.204)	0.179 (0.211)	0.268 (0.389)
Excellent	0.956*** (0.210)	0.987*** (0.206)	0.942** (0.396)
Observations	3088	1545	1543

Robust standard errors in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

**Table A4: The Probability of Being Employed Controlling for Acculturation Identity (non-students). Pooled Linear Probability Models (1995-2002).**

	(1)	(2)	(3)
	All	Men	Women
<b>Acculturation Phase (ref: Assimilated):</b>			
Integrated	-0.024 (0.018)	-0.026 (0.022)	-0.017 (0.025)
Separated	-0.083*** (0.031)	-0.094** (0.038)	-0.067 (0.049)
Marginalized	-0.066 (0.043)	-0.077 (0.051)	-0.026 (0.058)
Observations	21603	10946	10657
Robust standard errors in parentheses			
* significant at 10%; ** significant at 5%; *** significant at 1%			

Note: Estimations above also control for gender, marital status, children, residence, human capital, national background, prior labor market status, language proficiency, expectations and common time effects. Standard errors corrected for any unknown form of heteroscedasticity and serial correlation.

**Table A5: The Probability of Being Employed Controlling for Acculturation Identity. Pooled Linear Probability Models (1995-2002).**

	(1)	(2)	(3)
	All	Men	Women
<b>Acculturation Phase (ref: Assimilated):</b>			
Integrated	-0.032* (0.017)	-0.038* (0.019)	-0.025 (0.025)
Separated	-0.064** (0.030)	-0.079** (0.037)	-0.050 (0.049)
Marginalized	-0.052 (0.041)	-0.077 (0.049)	-0.009 (0.054)
Female	-0.084*** (0.017)		
Immigrant	0.023 (0.017)	0.008 (0.021)	0.036 (0.024)
Married	0.017 (0.020)	0.013 (0.018)	0.005 (0.032)
Children	0.019 (0.017)	0.093*** (0.020)	-0.035* (0.020)
Major Urban	0.021 (0.017)	0.008 (0.020)	0.027 (0.024)
<b>Education (ref: compulsory):</b>			
Upper-secondary	0.092*** (0.022)	0.091*** (0.027)	0.103*** (0.027)
Post-secondary (<2 yrs)	0.053 (0.037)	0.077** (0.036)	0.028 (0.055)
University	0.222*** (0.038)	0.223*** (0.044)	0.228*** (0.050)
<b>National Background (ref: Finnish):</b>			
Nordic	-0.064** (0.026)	-0.085** (0.035)	-0.050 (0.037)
West European	-0.130** (0.064)	-0.064** (0.030)	-0.184** (0.089)
East European	-0.059*** (0.022)	-0.093*** (0.028)	-0.032 (0.029)
African	-0.039 (0.035)	-0.074 (0.050)	-0.022 (0.050)
Asian	-0.088*** (0.024)	-0.113*** (0.029)	-0.066** (0.034)
South American	-0.075*** (0.026)	-0.088** (0.034)	-0.060 (0.037)
<b>Prior (1995) Labor Market Status (ref: Employed):</b>			
Empl-temp. absent	-0.022 (0.039)	-0.065 (0.063)	0.015 (0.051)
Labor Program	-0.059 (0.052)	-0.095** (0.043)	-0.004 (0.098)
Unemployed	-0.147*** (0.033)	-0.153*** (0.037)	-0.139*** (0.047)

Out of Labor Force	-0.129*** (0.035)	-0.138*** (0.033)	-0.102** (0.045)
Employed 1992	0.025 (0.022)	0.041* (0.025)	0.014 (0.029)
Employed 1993	0.072*** (0.026)	0.071*** (0.026)	0.077** (0.037)
Employed 1994	0.044* (0.025)	0.032 (0.026)	0.062* (0.036)
Income 1995	0.000*** (0.000)	0.000** (0.000)	0.000*** (0.000)
<b>Expectations (1995) of Future Employability (ref: Poor):</b>			
Fair	0.052 (0.035)	0.059 (0.037)	0.050 (0.051)
Good	0.127*** (0.036)	0.120*** (0.037)	0.129*** (0.053)
Excellent	0.150*** (0.042)	0.183*** (0.042)	0.118** (0.059)
<b>Swedish Language Proficiency (1995; ref: Poor):</b>			
Good	0.002 (0.026)	0.006 (0.030)	-0.014 (0.045)
Excellent	0.012 (0.025)	-0.018 (0.028)	0.029 (0.044)
Year dummies	yes	yes	yes
Observations	24043	12029	12014
R-squared	0.16	0.18	0.16
Robust standard errors in parentheses			
* significant at 10%; ** significant at 5%; *** significant at 1%			

**Table A6: Income Regressions Controlling for Acculturation Identity. Pooled Linear Probability Models (1995-2002).**

	(1) All	(2) Men	(3) Women
<b>Acculturation Phase (ref: Assimilated):</b>			
Integrated	-0.062 (0.041)	-0.094** (0.044)	-0.010 (0.061)
Separated	-0.064 (0.079)	-0.108 (0.098)	0.019 (0.128)
Marginalized	-0.174* (0.099)	-0.214* (0.125)	-0.034 (0.137)
Female	-0.235*** (0.038)		
Immigrant	0.001 (0.037)	0.041 (0.053)	-0.037 (0.047)
Married	0.021 (0.039)	-0.015 (0.057)	0.042 (0.049)
Children	0.062* (0.035)	0.240*** (0.057)	-0.048 (0.044)
Major Urban	0.074* (0.039)	0.062 (0.049)	0.076 (0.051)
<b>Education (ref: Compulsory):</b>			
Upper-secondary	0.174*** (0.046)	0.194*** (0.059)	0.134** (0.059)
Post-secondary (<2yrs)	-0.006 (0.073)	0.062 (0.094)	-0.054 (0.094)
University	0.624*** (0.069)	0.744*** (0.085)	0.547*** (0.091)
<b>National Background (ref: Finnish):</b>			
Nordic	-0.132** (0.060)	-0.214** (0.087)	-0.066 (0.081)
West European	-0.126* (0.068)	-0.285*** (0.076)	0.008 (0.100)
East European	-0.125** (0.052)	-0.267*** (0.071)	0.022 (0.061)
African	-0.155* (0.090)	-0.425*** (0.130)	0.055 (0.121)
Asian	-0.230*** (0.058)	-0.428*** (0.071)	-0.040 (0.086)
South American	-0.242*** (0.061)	-0.424*** (0.091)	-0.048 (0.079)
<b>Prior (1995) Labor Market Status (ref: Employed):</b>			
Empl-Temp. Absent	-0.184** (0.085)	-0.216 (0.136)	-0.139* (0.084)
Labor Program	-0.010 (0.135)	-0.162 (0.109)	0.163 (0.246)

Unemployed	-0.188** (0.076)	-0.155* (0.091)	-0.276*** (0.101)
Out of Labor Force	-0.160** (0.068)	-0.193** (0.084)	-0.139* (0.080)
Employed 1992	0.031 (0.042)	0.064 (0.050)	0.014 (0.056)
Employed 1993	0.128*** (0.044)	0.102** (0.052)	0.171*** (0.059)
Employed 1994	0.154*** (0.046)	0.104* (0.056)	0.216*** (0.059)
Income 1995	0.000*** (0.000)	0.000*** (0.000)	0.000** (0.000)
<b>Expectations (1995) of Future Employability (ref: Poor)</b>			
Fair	0.143* (0.083)	0.224** (0.103)	0.071 (0.110)
Good	0.283*** (0.085)	0.337*** (0.098)	0.207* (0.118)
Excellent	0.354*** (0.090)	0.422*** (0.104)	0.252** (0.120)
<b>Swedish Language Proficiency (1995; ref: Poor):</b>			
Good	0.032 (0.086)	-0.056 (0.076)	0.125 (0.162)
Excellent	0.044 (0.087)	-0.117 (0.072)	0.203 (0.162)
Year dummies	yes	yes	yes
Observations	20155	10060	10095
R-squared	0.19	0.22	0.18
Robust standard errors in parentheses			
* significant at 10%; ** significant at 5%; *** significant at 1%			





## The Stockholm University Linnaeus Center for Integration Studies (SULCIS)

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