# 9. Tracking in the Netherlands – Ability selection or social reproduction?[1]

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## INTRODUCTION

Tracking has often been found to increase the effect of socio-economic status (SES) on student performance (Ammermueller 2005; Schütz et al. 2008). Part of this increase could be explained by an SES effect on the tracking decision (e.g. Dustmann 2004; Ichou and Vallet 2011; Schneider and Tieben 2011; Sullivan et al. 2011; Tieben et al. 2009). Korthals (2012) argues that tracking is good for equal opportunities when track placement is based on prior performance, because this lowers the influence parents have on their child's educational path. Dollmann (2011) shows that the influence of SES on track choice is reduced when mandatory teacher recommendations play a role in track placement decisions.

Compared to other systems, the Dutch educational system has an extraordinarily high degree of achievement orientation with exit test and teacher recommendation at the end of elementary school and centralized written exams at the end of secondary school. Due to this, the direct influence of parents on track choice and performance is limited, and parents are able to exert only an indirect influence. This chapter starts with a short overview of the Dutch education system. This is followed by an analysis of the pre-tracking effects of SES. Finally, it discusses different trajectories in and after secondary education and their relation to SES and school selectivity.

## THE DUTCH EDUCATION SYSTEM

In the Netherlands, compulsory schooling starts at the age of five when children attend one year of pre-school. However, because then majority of parents choose to send their children to pre-school at age four, most children receive two years of pre-school. The two grades of pre-school are provided by elementary schools, and thus (in most cases) children do not change schools between pre-school and elementary school. School choice is up to the

parents for both elementary and secondary school. All schools – both private-dependent (mostly but not all religious) and public – are paid by the government and are held accountable to the same standards both for teacher quality and students' outcomes. The Netherlands has a national educational system that does not allow regional differences in curriculum or quality. Schools have limited autonomy regarding the content of the curriculum and didactic methods, in so far as they relate to their religious and philosophical background. The limits to this autonomy are the equal standards for all schools laid down by the state.

The Dutch secondary education system is highly differentiated with early selection into tracks at age 12 and four main tracks. The four tracks are practical education (PO, secondary education on elementary school level), pre-vocational track (vmbo), and two general tracks, one leading directly to university of applied sciences (pre-college track, havo) and the other leading to university (pre-university track or grammar school, vwo). The pre-vocational track is further sub-divided into four tracks. Vmbo-b is the most practical vocational track, whereas vmbo-k is the foreman track. Vmbo-g and vmbo-t have an increasingly theoretical focus. When students first enter secondary school, it is possible to attend 'bridge classes' in which students from (most often) two adjoining tracks are grouped together for one or two years. These can be, for instance, havo-vwo classes or vmbo-t-havo classes. However, in some schools, students are not tracked for the entire secondary phase (*Middenschool*) or they are tracked in bridge classes for the entire secondary phase.

Although upward track mobility is possible between tracks, students choose most often to 'stack' secondary school degrees (*stapelen*) by first finishing one level successfully and then moving up to the next higher track and repeating one year there. Track mobility before finishing a degree is directed mostly downwards. In Grade 9, that is, three years after tracking has started, one-quarter of students have switched between tracks (Education Inspectorate 2013). In total, 15 per cent of students move down one or more tracks, and 10 per cent of students move up.

The transition from elementary to tracked secondary school takes place at age 12. Secondary school principals decide on the track placement of students. They receive two legally obligatory signals on which they base their decisions: an elementary school exit test and a track recommendation from the student's elementary school teacher.[2] Parents may influence the track placement of their children only indirectly. For instance, they might support their children so that they perform better in the elementary school exit test or exert pressure on either the elementary school teacher (to give a higher track recommendation) or the secondary school. Because school choice is free, parents can also approach multiple secondary schools for their child until one of these schools accepts their child in the desired track.



To complete the secondary school degree, students take a centralized written exam at the end of each track. Marks from previous school years also enter the degree certificate. After completing the general tracks havo and vwo, students can opt for tertiary education (grades do not matter, only the degree). A degree from the havo track gives access to universities of applied sciences (hbo), whereas only completion of the vwo track gives direct access to universities (wo). However, students with a university of applied sciences bachelor degree are allowed to enter (although often via a pre-master programme) a university master. Students who choose the pre-vocational tracks in lower secondary education will move most often to a vocational school (mbo) for their upper secondary education.

## THE PRE-TRACKING SES EFFECTS

The aim of this section is to examine whether SES – over and above its association with student ability – is associated with the two determinants of track placement: the elementary school exit test and the elementary school teacher track recommendation.

### Data and Methodology

We use a longitudinal data set from COOL[5–18], a representative school study on the Netherlands that started in the academic year 2007–08. Every three years it collects administrative data from a representative sample of schools including test scores from centralized tests in each grade and survey data from students, parents, and school staff. We use two waves of the data: students who are in Grade 3 in 2007–08 and in Grade 6 in 2010–11.

The data consist of 649 schools in 2007–08 with a total of 15 473 students in Grade 3 and 552 schools in 2010–11 with 12 538 students in Grade 6. Unfortunately, the data contain a large number of missing observations on test scores and parental background and only 62 per cent of schools from the first wave participated in the second wave (Driessen et al. 2012). This also leads to a smaller sample for the longitudinal data set. We exclude students for whom we do not have enough test score and parental education data. Our final sample consists of 2 388 students in 156 schools. We use weights constructed to ensure representativeness for this smaller sample. We measure SES with the highest obtained educational degree of both parents in four categories: at most primary education, at most lower vocational education, at most vocational education, and at most tertiary education. This is provided by the school and comes from the school administration (Driessen et al. 2012).

To isolate the effect of SES on the two track determinants precisely, the SES effect on ability must be controlled for completely. In the analyses, this is done by including Grade 6 test scores that capture the child's ability. Because these test scores, like all other test scores, contain error in their measurement of ability, we apply an instrumental variable approach using test scores in Grade 3 to remove this measurement error. In this way, we are able to provide a better control for ability than that obtained in previous analyses of this type (e.g. Büchner 2013; Jackson 2013).

The elementary exit test score, the first track determinant, contains a math part (score ranges from 0 to 60) and a reading part (score ranges from 0 to 100). Theoretically, the elementary school teacher recommendation – the second track determinant – contains all the information on the child's ability level and progress in elementary school. We use a recommendation measure with eight track options: po and vmbo-b, vmbo k, vmbo g, vmbo t, vmbo-t/havo, havo, havo/vwo, and vwo.

### SES Effects on Exit Test Score

The results for the SES effects on the elementary school exit test score for mathematics and reading are shown in Table 9.1. Columns 1 and 4 show the full SES effect on the math and reading elementary exit test scores. These coefficients contain both the SES effect on ability and the additional SES effect on the track determinants. Parents have a large influence on the reading and mathematics test score, with students whose parents have a tertiary education degree scoring one standard deviation higher than students whose parents have only a primary education degree. In Columns 2 and 5, the test score in Grade 6 is included as a control. Any SES effect that has helped the child to perform better in the test subjects over the years should be included in the coefficient for this test score. As a consequence, the effect of SES on the elementary exit test score is lower in Columns 2 and 5 than in Columns 1 and 4.

However, if SES is correlated to the measurement error in the Grade 6 test score, it is possible that some remaining SES effect on ability will be captured by the SES dummies instead of by the Grade 6 test score. To remove this measurement error, Columns 3 and 6 present results for models in which the Grade 6 test score is instrumented by the test score in Grade 3. The content of both tests is comparable, and the $F$ statistic (525.9 for mathematics and 382.0 for reading) shows that the Grade 3 test is a strong instrument for the Grade 6 test. Looking at the IV estimates reveals an SES effect on the elementary exit test for reading that is over and above its effect on ability. The effect of SES is lower when an instrument is used, but a significant effect of SES still remains for reading, with students whose



*Table 9.1:* SES effects on the elementary school exit test

| | Math | | | Reading | | |
|---|---|---|---|---|---|---|
| | 1 OLS | 2 OLS | 3 IV | 4 OLS | 5 OLS | 6 IV |
| Parent: at most lower vocational education | 3.12* (1.53) | 0.91 (0.80) | 0.44 (0.76) | 3.53** (1.12) | 2.09** (0.75) | 1.43+ (0.74) |
| Parent: at most vocational education | 5.18** (1.40) | 0.46 (0.75) | -0.53 (0.77) | 7.55** (1.14) | 3.48** (0.92) | 1.63+ (0.99) |
| Parent: at most tertiary education | 10.42** (1.47) | 1.84* (0.86) | 0.04 (0.91) | 12.55** (1.21) | 5.32** (0.94) | 2.05* (1.00) |
| Grade 6 test | | 8.89** (0.22) | 10.76** (0.35) | | 2.09** (0.75) | 11.09** (0.51) |
| Constant | 36.45** (1.37) | 41.29** (0.75) | 42.31** (0.79) | 67.13** (1.09) | 7.63** (0.35) | 72.58** (0.82) |
| Number of students | 2 621 | 2 621 | 2 621 | 2 398 | 2 398 | 2 398 |
| Number of schools | 156 | 156 | 156 | 149 | 149 | 149 |
| $R^2$ | 0.09 | 0.68 | 0.66 | 0.10 | 0.51 | 0.43 |
| $F$ excl. instrument | | | 525.9 | | | 382.0 |

*Source:* Own calculations based on data from COOL[5–18].

*Notes:* $+p < 0.10$, $*p < 0.05$, $**p < 0.01$. Robust standard errors in parentheses. Clustered by Grade 6 schools, weighted data. Estimates in Columns 3 and 6 are from a two-stage least-squares model with the test score in Grade 3 as excluded instrument for the test score in Grade 6.

parents have a tertiary degree scoring one-sixth of a standard deviation higher than students whose parents have only a primary education degree.

There is no longer an SES effect on the math exit test score. This could possibly be due to the fact that it is easier for parents to help their child with reading than with math because reading practice in the home is easily available – for instance by reading the newspaper together. That the SES effect in Columns 3 and 6 is lower than in Columns 1 and 4 does not mean there is no or less of an SES effect. Due to the inclusion of the Grade 6 test score, all direct SES effects are captured in this variable. SES therefore most certainly has an effect on the elementary exit test. What Columns 3 and 6 show is that for math, there seems to be no additional SES effect on the elementary exit test after controlling for ability, whereas there is an effect on the reading exit test.

Further analyses using school fixed effects and an extended sample using imputed values show that the SES effect on reading is not fully robust, lowering the confidence in these results (see Korthals 2015). However, the

results are most likely an underestimation due to the short time between the Grade 6 test and the elementary exit test.

### SES Effect on Teacher Recommendation

Table 9.2 shows the results when looking at the elementary school teacher recommendation. Here as well, Column 1 gives the estimates for the full SES effect displayed in odds ratios. The estimates in Column 1 of Table 9.2 state that for students whose parents have a tertiary education degree, the odds of having the highest track recommendation rather than the other recommendations are almost 13.5 times greater than for students whose parents have only a primary education degree.

Column 2 of Table 9.2 also includes the Grade 6 test scores to separate the SES effect on the track determinants from the SES effect on ability; and Column 3 also includes the elementary school exit test scores on math and reading. Column 3 shows that for the second highest and highest SES group, there remains an SES effect on the elementary school teacher recommendation after inclusion of test scores. Another way to interpret these results is by looking at how far tertiary educated parents are able to bridge the gap between the lowest and the highest track. This is given in the last row of Table 9.2. In the model with no controls, they are able to bridge 56 per cent of the distance between the lowest and the highest track; whereas in Column 3, they are able to bridge 13 per cent of the distance.

These results also hold when using IV (Column 4), although these analyses are for illustrative purposes only because IV requires a linear dependent variable. Robustness analyses using an extended sample confirm that the SES effect exists for the second lowest and the highest SES category (see Korthals 2015).

## THE TRAJECTORIES IN SECONDARY EDUCATION

Recently Dunne (2010), Dronkers et al. (2012), and Korthals (2012) introduced a three-level model: countries, schools, and students. They showed that school characteristics such as socio-economic composition and ethnic diversity have substantial effects on achievement levels and also affect the relation between parental background and achievement. Moreover, these school characteristics seem to mediate some of the effects of tracking. However, such results strongly contradict the consensus on the effects of tracking on outcomes and inequality when these are based exclusively on a two-level model: countries and students. The most important contributors to the two level models are Hanushek and Wößmann (2006), Schütz et al. (2008), Wößmann et al. (2009) and Hanushek and Wößmann (2012). Esser



*Table 9.2:* SES effects on the elementary school teacher recommendation

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| | ologit | ologit | ologit | IV |
| Parent: at most lower vocational education | 2.05** | 1.54 | 1.28 | 1.13 |
| | (0.47) | (0.42) | (0.37) | (0.14) |
| Parent: at most vocational education | 4.28** | 2.30** | 1.93* | 1.38* |
| | (0.89) | (0.65) | (0.57) | (0.18) |
| Parent: at most tertiary education | 13.49** | 5.16** | 3.65** | 1.62** |
| | (3.34) | (1.65) | (1.20) | (0.24) |
| Math test Grade 6 | | 5.44** | 2.65** | 2.01** |
| | | (0.67) | (0.43) | (0.41) |
| Reading test Grade 6 | | 4.45** | 2.22** | 2.44** |
| | | (0.40) | (0.25) | (0.37) |
| Elementary exit test: math | | | 1.09** | 1.01 |
| | | | (0.01) | (0.01) |
| Elementary exit test: reading | | | 1.14** | 1.02** |
| | | | (0.01) | (0.01) |
| Number of students | 2 452 | 2 452 | 2 452 | 2 307 |
| Number of schools | 152 | 152 | 152 | 149 |
| (Pseudo) $R^2$ | 0.04 | 0.30 | 0.38 | 0.69 |
| Parent: HBO/WO/(Cut 7–Cut 1) | 0.56 | 0.20 | 0.13 | – |
| $F$ statistic math test Grade 6 | – | – | – | 50.66 |
| $F$ statistic reading test Grade 6 | – | – | – | 24.24 |

*Source*: Own calculations based on data from COOL[5–18].

*Notes*: $+ p < 0.10$, $* p < 0.05$, $** p < 0.01$. Robust standard errors in parentheses. Ordered logit with weights, constants omitted from table. Odds ratios for the first three columns. Third row from the bottom states: Being from the highest SES group bridges 13 per cent (Column 3) of the distance between the highest and the lowest track. Calculated using logit coefficients. Pseudo $R$-squared for the logit models. IV using a continuous version of the teacher recommendation based upon the ologit cut points. To facilitate comparison between the columns, the IV coefficients are displayed as exp(b), similar to ologit odds ratios.

(forthcoming) presents an extensive discussion on the possible explanations for the different outcomes of the two-level and three-level approaches. In stratified educational systems, students will be allocated to various hierarchically ordered tracks at the start of secondary education. However, the base of this allocation might vary across stratified systems. On the one hand, this allocation might be based on the wishes of parents and their ability to convince the secondary school to accept their child as a student. Voluntary tests, non-standardized school grades, and non-binding teacher's recommendations might be instruments for the parents in this process of

convincing educational authorities. On the other hand, this allocation might be based only on earlier educational performance in elementary education as measured by obligatory standardized tests and obligatory teacher's recommendation. Therefore, our *first hypothesis* is that in a stratified educational system such as the Dutch one, early ability and teacher's recommendation will be better predictors of the admission to school types than parental background for both the single track and the multiple track school.

Different curricula are being taught in these different tracks. Given that allocation to these Dutch school types has been based mainly on early ability and teacher's recommendation, our *second hypothesis* is that parental education, socio-economic school composition, and ability-based school composition will no longer relate significantly to later educational and occupational performance during or after secondary education, but that early ability and track will have substantial effects due to the different curricula.

## Data and Methodology

We use data from the VOCL'89 cohort (15 747 students born in the Netherlands who entered secondary education for the first time in 1989 at the age of 12 years).

## Admission into Secondary Education Tracks

In this section we want to establish whether the strength of the effect of parental education on attending a track in the first or second year is larger than the strength of early ability. The first two columns in Table 9.3 give the results of two multinomial logistic regressions with tracks as dependent variables (first year, second year) and parental education and early ability as covariates. Grammar school (vwo track) is the reference category. Because we show the exponent of the estimate, we can compare the results more easily. Both parameters of parental education and early ability are significant, but the strength of the parameter of early ability in tracks is much stronger than that of parental education. The early ability variable best explains the chosen track ($R^2$), and this reflects the cognitive aspect of the allocation to various tracks. The variance explained by parental education is much smaller and the parameter is strongest for the allocation to grammar school. The last two columns of Table 9.3 give the parameters when either parental education or early ability is the only covariate. The strength of the parameters of parental education in the third column is stronger than those in the first column, whereas the parameters of early ability in the second and fourth columns are more or less equal.



*Table 9.3:* Track in first and second year predicted by parental education and scholastic ability together and separately (6 multinomial logistic regressions; *exp(b)*)

| | Combined | | Separate | |
|---|---|---|---|---|
| | Parental education | Early ability | Parental education | Early ability |
| | First year Secondary Education 1989–90 | | | |
| Lbo (Lower vocational) | 0.86 | 0,68 | 0,66 | 0,83 |
| Mavo (Lower general) | 0.90 | 0.75 | 0.73 | 0.88 |
| Vwo (Grammar school) | Ref. | Ref. | Ref. | Ref. |
| Lbo–mavo | 0.87 | 0.70 | 0.68 | 0.85 |
| Mavo–havo | 0.92 | 0.78 | 0.76 | 0.90 |
| Mavo–havo–vwo | 0.92 | 0.82 | 0.80 | 0.91 |
| Havo–vwo | 0.94 | 0.91 | 0.90 | 0.94 |
| Comprehensive school | 0.90 | 0.72 | 0.71 | 0.88 |
| Ibo | 0.85 | 0.56 | 0.55 | 0.80 |
| Log likelihood | 22 122 | | 1 960 | 3 531 |
| Nagelkerke's $R^2$ | 0.55 | | 0.22 | 0.51 |
| | Second year Secondary Education 1990–91 | | | |
| Lbo (Lower vocational) | 0.88 | 0.68 | 0.67 | 0.86 |
| Mavo (Lower general) | 0.93 | 0.75 | 0.74 | 0.91 |
| Havo (Middle general) | 0.96 | 0.85 | 0.85 | 0.96 |
| Vwo (Grammar school) | Ref. | Ref. | Ref. | Ref. |
| Lbo–mavo | 0.91 | 0.69 | 0.68 | 0.89 |
| Mavo–havo | 0.93 | 0.78 | 0.78 | 0.92 |
| Mavo–havo–vwo | 0.93 | 0.79 | 0.79 | 0.92 |
| Havo–vwo | 0.97 | 0.91 | 0.89 | 0.97 |
| Comprehensive school | 0.94 | 0.70 | 0.68 | 0.92 |
| Ibo | 0.87 | 0.56 | 0.54 | 0.83 |
| Log likelihood | 21 600 | | 2 059 | 3 759 |
| Nagelkerke's $R^2$ | 0.56 | | 0.21 | 0.53 |

*Source*: Own calculations based on data from VOCL'89.
*Note:* All parameters significant.

Moreover, the fit of the equation without early ability is substantial lower than the fit of the equation with both parental education and early ability. This shows that early ability is the most important predictor of the allocation to the different tracks, but that parental education is also relevant for the chosen track. These results support our first hypothesis predicting that the strength of education is substantially smaller than that of early ability in highly differentiated educational systems.

## Final Educational Attainment

In this section we test whether parental education and socio-economic school composition are related to final educational attainment after having definitely left education. Table 9.4 shows clearly that early ability is the best predictor of the Dutch language score followed by track. The addition of the school composition variables to the equation improves the model fit (BIC) most strongly (Model 1 vs Model 2; Model 3 vs Model 4). Parental education remains significant in all models, but its strength declines strongly after addition of early ability. Socio-economic school composition has a

*Table 9.4:* Multilevel OLS regression with educational attainment as dependent variable

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Parental education | 0.12** | 0.10** | 0.12** | 0.10** | 0.02 | 0.10** |
| | (0.01) | (0.01) | (0.01) | (0.01) | (0.03) | (0.01) |
| Early abilities | 0.27** | 0.23** | | 0.20** | 0.19** | 0.07 |
| | (0.01) | (0.01) | | (0.02) | (0.02) | (0.07) |
| Average early ability Secondary school | | 0.12** | | –0.03 | –0.03 | –0.03 |
| | | (0.03) | | (0.03) | (0.03) | (0.03) |
| Average parental education Secondary school | | 0.06 | 0.27** | 0.01 | 0.02 | 0.02 |
| | | (0.03) | (0.02) | (0.03) | (0.03) | (0.03) |
| Vwo (Grammar school) | | | | Ref. | Ref. | Ref. |
| Lbo (Lower vocational) | | | | –0.73** | –2.19** | –1.29** |
| | | | | (0.07) | (0.43) | (0.31) |
| Mavo (Lower general) | | | | –0.17** | –1.18** | –0.67* |
| | | | | (0.05) | (0.39) | (0.31) |
| Havo (Middle general) | | | | –0.07 | –0.32 | –0.59 |
| | | | | (0.05) | (0.53) | (0.40) |
| Lbo & mavo | | | | –0.42** | –1.45* | –0.99** |
| | | | | (0.09) | (0.61) | (0.35) |
| Mavo & havo | | | | –0.03 | –0.67 | –0.16 |
| | | | | (0.10) | (0.92) | (0.50) |
| Mavo, havo & vwo | | | | –0.16 | –2.23* | –0.80 |
| | | | | (0.10) | (0.71) | (0.42) |
| Havo & vwo | | | | –0.02 | –0.20 | –0.70* |
| | | | | (0.06) | (0.43) | (0.35) |
| Comprehensive school | | | | –0.53** | –2.58** | –1.63** |
| | | | | (0.11) | (0.71) | (0.36) |
| Ibo | | | | –1.04** | –2.36** | –1.39** |
| | | | | (0.10) | (0.84) | (0.36) |



*Table 9.4:* Continued

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Interaction with parental education (Model 5) or early ability (Model 6) | | | | | | |
| Lbo (Lower vocational) | | | | | 0.14** | 0.13 |
| | | | | | (0.04) | (0.07) |
| Mavo (Lower general) | | | | | 0.09** | 0.11 |
| | | | | | (0.04) | (0.07) |
| Havo (Middle general) | | | | | 0.02 | 0.12 |
| | | | | | (0.05) | (0.10) |
| Lbo & mavo | | | | | 0.10 | 0.13 |
| | | | | | (0.06) | (0.09) |
| Mavo & havo | | | | | 0.06 | 0.00 |
| | | | | | (0.09) | (0.13) |
| Mavo, havo & vwo | | | | | 0.20** | 0.15 |
| | | | | | (0.07) | (0.10) |
| Havo & vwo | | | | | 0.02 | 0.16* |
| | | | | | (0.04) | (0.08) |
| Comprehensive school | | | | | 0.20** | 0.34** |
| | | | | | (0.07) | (0.09) |
| Ibo | | | | | 0.13 | 0.00 |
| | | | | | (0.09) | (0.14) |
| School level variance | 0.09 | 0.06 | 0.10 | 0.03 | 0.03 | 0.03 |
| | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Student level variance | 0.73 | 0.73 | 0.76 | 0.73 | 0.73 | 0.73 |
| | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| BIC | 21 996 | 21 958 | 22 263 | 21 868 | 21 921 | 21 932 |

*Source*: Own calculations based on data from VOCL'89.

*Notes*: + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. The five interval variables are standardized. Number of students = 8 526; number of schools 1990–91 = 317.

significant effect only in Model 3 when ability school composition is not included in the equation. These results provide partial support for the second hypothesis that both parental education and socio-economic school composition will no longer relate significantly to the performance score, but that track will have substantial effects.

Model 5 in Table 9.4 also supports the second hypothesis. Here we add the interactions between parental education and tracks. The first result is that the main effect of parental education becomes insignificant, whereas some interactions between tracks and parental education attain positive significance. At the same time the positive and significant effect of early ability remains unchanged. Selection into tracks (when track choice is based

mainly on early ability and teacher's recommendation) therefore provides a possible explanation for the overall higher effects of SES on educational performance in differentiated systems.

The second result is on the nature of those tracks that reveal significant and positive interactions with parental education. These are only those tracks on which the selection into various tracks is not yet completed (lower vocational and general; lower, middle general and grammar; and comprehensive). Parental education has significant effects on final educational attainment only in these more undifferentiated tracks, whereas there is no effect of parental education in the other more differentiated tracks. This supports the assumption that SES is significant only within tracks without ability selection, whereas it is insignificant within tracks with ability selection.

Model 6 adds to Model 4 the interactions between early ability and tracks. The main effect of early ability becomes insignificant, whereas two interactions between tracks and early ability attain positive significance (middle general and grammar; comprehensive). The other interactions are insignificant. This shows that early ability continues to influence performance only in the least selective tracks (middle general and grammar; comprehensive). Analyses using occupational status show similar results.

## CONCLUSION

In this chapter, we first look at whether there is an SES effect on the two track determinants in the Netherlands that is over and above an SES effect on ability. Second, we look at the SES effect on the trajectories in secondary education. In both analyses we find SES effects. We find an SES effect on early ability, an additional SES effect on the two track determinants, and also an SES effect on the actual track choice after controlling for early ability. However, early ability is the most important variable with which to explain success at each stage of the educational career from the elementary school teacher track recommendation up to occupational status, although its impact diminishes with each further stage.

In the first section of this chapter, we show that parents are able to increase their child's reading elementary school exit test score and the elementary school teacher track recommendation. Students with higher educated parents display a larger positive SES effect than those from lower educated parents. We find no such effect on the math exit test score.

In the second section, we show that parental education influences the track allocation during and at the end of their children's educational careers, and its impact grows over the career. The composition of schools, measured in terms



of either ability or SES, has no independent effect on educational performance in the third year or on final attainment after controlling for track level. Therefore, ability and SES composition of schools can be seen as by-products of selection into a hierarchy of tracks based on early ability and on primary effect of SES. Controlling for the actual track level, we show that track level influences educational performance in the third year, final attainment, and, to some extent, occupational status. Early ability and parental education influence performance and attainment more strongly in tracks that are mixed (mavo, havo, and vwo) or less selective (comprehensive schools).

The Dutch educational system uses extensive ability selection. Nonetheless, parental education continues to influence outcomes during and after secondary education. The present results do not reveal whether this is due to parents purposefully or unconsciously exerting an influence or to a differentiated response of third parties. Alongside the direct SES effect on outcomes presented here, due to the strong correlation between early ability and parental education, it is most probable that an indirect social reproduction effect also remains dominant in Dutch education.

## NOTES

1 This chapter is based on Korthals (2015) and Dronkers (2015).
2 In the academic year 2014/2015, the use of the elementary school exit test in deciding the track choice has been limited by the government in favour of the teachers' recommendation.

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# PART IV

# The Nordic inclusive model