

4.2 THE ROLE OF EARLY CHILDHOOD SHOCKS IN THE EMERGENCE OF GENDER INEQUALITIES

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Research on the reasons for the gender gap in employment often focuses on factors affecting individuals in late childhood (education, career choice) and adulthood (having children, career paths). However, labour market performance is strongly influenced by the components of human capital such as mental capacity (cognitive skills), personality traits and health. The components of human capital are actively shaped by the environment from the moment of conception. In the months prior to birth, intrauterine effects and stimuli provide the environment for foetal development. The inherited set of genes, the number of prior abortions of the mother, her way of life before and during pregnancy, addictions, nutrition, stress level as well as air and water quality are all found to have an impact on the foetus. The circumstances of birth, preterm delivery, complications during delivery and the quality of subsequent medical care are decisive for later life. Following birth, children's primary environment is within their families, where most effects come from. The amount and quality of food intake is important, just as how much family members talk and read to the child, if there is violence, substance abuse or financial insecurity in the family – and a divorce or adoption may also be decisive events. Additionally, the wider environment, including air and drinking water pollution, local medical care and health visiting service and the access to and quality of nurseries, kindergartens and primary schools also influence human capital (*Szabó-Morvai, 2016*).

By the time children are ten years old, they are affected by plenty of impacts largely defining their labour market success. Some of these influences have been proven to affect girls and boys differently. In order to understand the reasons for the gender employment gap, it is useful to consider which circumstances result in what kind of differences in human capital between genders. Research findings show that psychological harm such as violence or neglect negatively affect both boys and girls. However, physiological impacts such as starvation, harmful environmental factors and poverty affect boys more. This may be due to the profound difference in the neurobiological development of boys and girls between conception and the age of two (*Schore, 1994, 2017*).

According to *Schore (2017)*, the right hemisphere of boys develops more slowly than that of girls and thus boys are more susceptible to negative environmental impacts than girls of the same age. *Kunzler et al. (2015)* reported that infant boys react differently to separation anxiety (separation from the mother): their cortisol levels soar significantly and repeated separation leads

to the divergent development of some of the neural pathways in the brain, which will be responsible for future behavioural disorders, while emotional responsiveness and stress tolerance will also change.

This may be the reason why grade repetition at school, behavioural problems, substance abuse, juvenile delinquency, suicide or psychological disorders such as attention deficit hyperactivity disorder (ADHD) or autism spectrum disorder are seen in a higher proportion of boys. For example *Chetty et al. (2016)* used administrative data to prove that boys brought up in single-parent families in poor financial circumstances are less likely to find employment in their twenties than girls brought up in similar circumstances.

Many children are exposed to these risks: in Hungary the share of children living in poor households¹ is 18 per cent, the share of children living in single-parent families² is 12.5 per cent, while the share of vulnerable children in basic school³ is 5.1 per cent. *Table 4.2.1* indicates data on Hungarian men in some important dimensions. For example the share of suicide is 3.5 times and the share of prisoners are 19.9 times higher among men than among women.

Table 4.2.1: Dimensions of vulnerability among men and women

	Men	Women	Difference (percentage point)
Share of SEN pupils (per cent, 2009–2015) ^a	5.98	3.29	1.8
Suicide (hundred-thousands, 2010) ^b	35	10	3.5
Number of prisoners (2016) ^c	16,361	822	19.9
Drug users attending treatment (2016) ^d	9,357	4,235	2.2
Number of registered alcoholics	12,952	5,033	2.6

^a Based on data from the National Assessment of Basic Competences organised by the Educational Authority.

^b Central Statistical Office (CSO).

^c Eurostat.

^d CSO.

1 Age group: 0–5 years, 2016. Source: *Varga et al. (2018)*.

2 Data from 2001, age group: below six. CSO.

3 2016, pupils in basic (primary and lower secondary) school. The share of pupils vulnerable because of family circumstances (malnourished, exposed to domestic violence, neglected or showing symptoms of drug addiction) as reported by school-teachers. Source: Institute of Economics, HAS.

4 The postpartum depression of mothers is a typical form of neglectful parenting: in this case the mother does not or insufficiently responds to the needs, signals and communication of the baby. Neglectful parenting causes as much harm in the future development of children as physical abuse.

5 Several studies reported that childhood abuse and neglect result in structural changes in the corpus callosum, thus the part of the brain providing one of the most important links between the two hemispheres will be smaller. This may lead to a deterioration of the efficiency of cognitive functions (*Petersen et al. 2014*).

Hereafter research with non-exhaustive examples for the association between early childhood shocks and later consequences are described.

Emotional shocks

Research findings concerning later impacts of early childhood shocks are mixed. *Petersen et al. (2014)* found that boys neglected⁴ or abused in childhood were more likely than girls to have behavioural disorders.⁵ This is contradicted by *Currie–Widom (2010)*, which compared victims of childhood violence or neglect with a group of individuals not experiencing these. The members of the group exposed to violence were 14 per cent less likely to be employed and if employed, they were less likely to have a job requiring a qualification. They were also more likely to earn lower wages and have fewer assets (a car, house etc.). The impacts were stronger in the case of women than in the case of men. *Norman et al. (2012)*, in their meta-analysis, did not find a sig-

nificant gender difference in the negative consequences of childhood abuse and neglect. *Phelps* (1998) found that the divorce of parents did not affect boys significantly, while the earnings of women clearly decreased. However, *Lizardi et al.* (2009) reported that while parental divorce did not increase the risk of suicide for girls, it did increase it for boys.

Physiological impacts

As for physiological environmental shocks, research results are more consistent: consequences are clearly more severe for boys. *Catalano* (2011) and *Catalano et al.* (2013) and (2006) provide circumstantial evidence for the vulnerability of boys in the womb by reporting that at times of natural or social disasters and economic crises the share of boys in live births decreases.⁶ Additionally, negative intrauterine impacts not only affect foetal loss, but also influence the future health and cognitive characteristics of surviving infants.

Analysing children born after the terrorist attacks of 11 September 2001 in New York, *Currie–Schwandt* (2015) found that air pollution with dust has a negative impact on the birth weight of infants, with a clearly stronger effect on boys: their birth height is significantly smaller, and they may develop cardiovascular problems, such as high blood pressure in later life.

The employability of boys brought up in poverty, single-parent families and a disadvantaged neighbourhood is substantially lower than that of girls brought up in similar circumstances (*Chetty et al.* 2016). *Autor et al.* (2015), relying on administrative data of boy-girl siblings, showed that the sons of low-qualified single mothers, who attend low-quality primary school, will be more likely to play truant or have behavioural problems than their sisters. These boys also achieve lower scores on competence tests, are less likely to complete upper-secondary school and more likely to be juvenile offenders.

⁶ *Eriksson et al.* (2010) suggest that the placenta of boys transports nutrients more efficiently (therefore they tend to grow bigger during pregnancy); however, it is less capable of storing them. This is why the growth of boys requires more nutrients and a less favourable environment (for example the starvation of their mothers) causes more harm in foetal development.

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