

Occupational Variation in Child Health and Gender Comparison

Andilip Afroze¹, Jayanta Sarkar²

¹ School of Economics and Finance, QUT Faculty of Business and Law, Queensland University of Technology, Queensland, Australia

² School of Economics and Finance, QUT Faculty of Business and Law, Queensland University of Technology, Queensland, Australia

Abstract

The classic theory of quantity-quality trade-off on intrahousehold resource allocation plays an essential role in family planning programs, especially in the developing world, where large families are often discouraged. This theory by Becker (Becker, 1960, Becker and Lewis, 1973) states an inverse relationship between the number of children in a family and the quality of a child. Many studies sought empirical evidence of this trade-off; however, researchers predominantly applied educational outcomes with little attention to health as a quality of a child (Dasgupta and Solomon, 2018, Hatton and Martin, 2010, Lundborg et al., 2015, Millimet and Wang, 2011, Peters et al., 2014, Sarkar, 2019, Zhong, 2017). Besides inadequate research, quantity-quality literature on child health fails to deliver conclusive empirical evidence that supports the standard Beckerian proposition. While some studies found support for the trade-off (David, 2019, Lawson and Mace, 2008, Liu, 2014, Zhong, 2017), many found no support (Dasgupta and Solomon, 2018, Millimet and Wang, 2011, Peters et al., 2014, Sarin, 2004), mixed support (Hatton and Martin, 2010, Rosenzweig and Zhang, 2009), and even opposite of the fundamental proposition (Lundborg et al., 2015). This study attempts to explain the inconsistent findings in the quantity-quality trade-off by empirically introducing parents' occupational characteristics in an extended quantity-quality model. The role of occupational variation in quantity-quality relationships on child health has been proposed and theoretically established by Sarkar (2019) and Sarkar (2021), which motivates the present study to verify the role of parents' occupation empirically. To the best of our knowledge, this is the first study to verify the role of occupation in quantity-quality trade-off empirically. This study links parents' occupational strenuousness with the association between child health and family size in the developing country of Indonesia by utilizing data from the Indonesian Family Life Survey (IFLS). The study employs the Instrumental Variable (IV) approach to estimate the causal effect of the family size. Family size is defined as the number of siblings, and child health is assessed using anthropometric measurements such as BMI-z-score, weight-for-age and height-for-age. In addition, the study explores disparities between male and female children in this trade-off across parents' occupational strenuousness.

Besides contributing to the limited literature on quantity-quality in child health, the study offers findings from the developing world that is less explored (Bornstein et al., 2012), although more expected to have such trade-offs due to persistent resource constraints (Peters et al., 2014). In addition to quantity-quality literature, this study contributes to the work-family conflict (WFC) literature. It connects work-family conflict with child-related outcomes, which has remained less explored despite the vast literature on WFC (Cho and Allen, 2012). Moreover, work characteristics based on occupational strenuousness have not been considered earlier in the WFC literature.

Preliminary findings depict that both families with parents in strenuous jobs and non-strenuous jobs exhibit a trade-off between children's BMI-z-score and the number of siblings indicating that BMI decreases as the number of siblings increases. However, increasing siblings reduce child BMI in nonstrenuous families more than in strenuous job families. Interestingly, although the strenuous job of parents negatively affects child health, increasing children does not necessarily have a higher negative impact in a strenuous job family compared to a non-strenuous job family. The study explains this strange finding by applying the 'Hygiene' theory proposed by Strachan (1989). Finally, the study observes that parents' occupational variation matters, and parents working in different occupations impose an additional effect that the traditional quantity-quality model ignores. This limitation partially explains the inherent inconclusiveness in the empirical findings due to the varied signs of this additional effect across population groups. However, the trade-off differs across health measures as weight-for-age and height-for-age exhibit much weaker quantity-quality relations. Gender comparison

reveals that the trade-off is larger in male children than female children in strenuous job families, although both groups show lower trade-offs than in non-strenuous job families.

Key Words

quantity–quality trade-off, child health, occupation, family size