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Family and economic growth in Poland New estimation results^{*}

Abstract

Economic growth is mostly explained by investments and employment growth. Since the mid-1990s various social categories have been introduced into the economic growth analysis, such as trust, crime and income inequality, etc.

According to sociology and psychology, it is the family that constitutes interpersonal relationships and is an indicator of happiness and quality of life. It can be said that happy people better fulfil their social roles and also work better. We put forward the hypothesis that family ties have an influence on economic growth. More precisely: the more divorces (relative to existing marriages) there are, the slower economic growth is.

This hypothesis was confirmed in an analysis of Poland's economy in the years 1995–2017. Due to the disintegration of family ties measured by the divorce rate, Poland's annual economic growth was slowed by about a 1 percentage point on average. This estimation is based on the productivity (GDP to labor ratio) growth model which, along with the divorce rate, also includes the investment and new marriage rates.

Keywords: economic growth, family, Work-Family Balance, econometric model, marriage, divorce

JEL Classification: A13, C01, O11, O41, O47

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1. Hypothesis: unstable families—a slowdown in the economy?

An important component of social capital is family social capital, i.e. family ties capital. Family capital, so far, has been sporadically introduced into econometric models of economic growth. As if society was important, and the family—the immediate environment—less important or even not important at all.¹ I attempt to use the statistics of marriages, divorces and fertility as measures of family social capital. Then the links between these categories and economic growth are examined.

Parallel considerations of family and economy constitute a formalised, model look at Work-Family relations. My main hypothesis assumes the dominance of balance over conflict. In model terms, it is the hypothesis about the dominance of balance, i.e. that a well-functioning family fosters the economy and vice versa. The parameters describing these interactions should be positive.

I believe that an analysis of the economy separated from the family is an oversimplification. This is not a new point of view, as already Adam Smith (2006), referring to the stoic idea of proper conduct and Aristotle's concepts, said that:

among those primary objects which nature had recommended to us as eligible, was the prosperity of our family, of our relations, of our friends, of our country [...]. (p. 250)

The most lasting relationships that connect people are family ties, i.e. the ties between spouses, parents and children, grandparents and grandchildren, and siblings. The permanence and importance of family relationships stem from tradition, culture, religion and the institution of marriage.² The permanence and strength of parents' relationships with children additionally depend on organic maternal and paternal ties.³ We love (or hate) most often and in the most lasting manner and we are loved (or not) in the family, the quality of our lives, as well as a sense of happiness and security are dependent on family ties.⁴ It seems that relationships with people outside of the family circle are weaker and cannot replace family ties,

¹ One can guess that this incorrect gradation of importance is a result of the conviction that the strength of family ties is not suitable for statistical measurement.

² Kocik (2006) points to the fact that “the institution of marriage and family has often been more important than religion, ethnicity, civic background or nationality, as they have been changed for the sake of sanctioning of the marriage and family” (p. 60).

³ Similarly, one can see the role of such ties in the relationship between grandchildren and grandparents.

⁴ Smith (2006) states that “[a]fter himself, the members of his own family, those who usually live in the same house with him, his parents, his children, his brothers and sisters, are naturally the objects of his warmest affections” (p. 198). Zubrzycka (1993) justifies the importance of love in the family by saying that love creates the readiness for mutual understanding and respect, allows one to provide and feel a sense of security, and generates loyalty in sharing work and responsibility (p. 95). Adamski (2002) claims that above all in the family man can satisfy *the need for feelings* and this has a huge impact on people's attitude and life activity (pp. 41–42).

due to a lack of “irrevocable” kinship and institutional character, as well as weaker cultural and religious support of their permanence.

The basis of the family is marriage.⁵ Sources of family permanence are derived mainly from the unbreakable nature of blood ties and the legal institutionalisation of marriage. The permanence of marriage is strongly supported by tradition, culture and, especially in Poland, by religion.⁶ Catholic religion gives marriage the rank of an indissoluble sacrament. John Paul II in *The Letter to Families* (1994) emphasised that man “cannot ‘fully find himself except through a sincere gift of self.’ [...] The gift of the person must be lasting and irrevocable” (p. 11).⁷ In a context wider than the one related to the family, John Paul II asked: “Can an individual find complete fulfilment without taking account of his social nature, that is, his being ‘with’ and ‘for’ others?”⁸ A family breakdown, and in the extreme case, a divorce, is a crisis in the life of each of the spouses and their loved ones. It is the crisis of family now and in the next generations, the crisis of humanity.

Kocik (2006) states that the family “[...] links the human being in all phases of life with society, culture, nation, and social class. It motivates economic, social and cultural activity, it shapes the personality traits of man” (p. 58). Similarly, Tyszka (1980, quoted after Kocik, 2006, p. 59) writes that the micro-world of the family is integrated into the system of general social, economic and cultural processes of a given country.⁹

[...] married people are happier than single ones, have higher incomes, experience warmth and emotional support, [...] live longer than single people. (Slany, 2003, pp. 41–42)

[...] ‘A good family’ creates the best environment for primary, deepest socialisation, being an irreplaceable source of a sense of security and stability for an individual, as well as an inspiration for development and self-realisation. (Kocik, 2006, p. 314)

⁵ A traditional family consists of spouses and their children (also adopted); as well as people related by affinity or consanguinity. Attempts are made to extend the scope of the family concept to include cohabitation. In English, the concept of the family is more akin than in Polish to the concept of household.

⁶ The role of religion was already emphasised by Smith (2006): “[...] The administration of the great system of the universe, however, the care of the universal happiness of all rational and sensible beings, is the business of God and not of man. To man is allotted a much humbler department, the care of his own happiness, of that of his family, his friends, his country” (p. 215).

⁷ *The Letter to Families* is not of a scientific nature, it is cited as an illustration of the position of the Catholic Church, which significantly affects people’s attitudes. The importance of the family is in fact smaller for people who declare a low participation rate in religious practices. Cf. Centre for Public Opinion Research, 2008, p. 5.

At the turn of the 20th and 21st centuries, strong attacks on the institution of the family were carried out at the UN forum. In the documents of UN special sessions, attempts were made, among others, to replace the word *family* with the word *partnership*. An important role in blocking these attempts was played by representatives of Poland. Cf. Kropiwnicki, 2008.

⁸ The question was asked by John Paul II during the celebration of the World Day of Peace in 2005 (p. 3). Cf. Bauman, 2007, pp. 357–358.

⁹ Kocik (2006) adds that “the analysis of family life cannot be limited only to matters within the family but must also concern the external relations of the family—its embedding in society, its structures, processes and culture” (p. 59).

In the four above-mentioned statements, the motif of the relationship between the family and the economy as well as the development of an individual—the development of human capital in the long run—can be seen.

Already Smith (2006) claimed that the permanence and importance of the family are diminishing due to the development of civilisation associated with the growing legal protection of man of even the “most humble station” (p. 277).

A modern attempt to describe the decline in the importance of the family is the theory of the second demographic transition (dating back to around 1960). This transition consists in an individual’s pursuit of self-realisation and autonomy, the rejection of traditional values for the benefit of the liberal ones, the improvement of the living conditions of the population as a result of the development of services and technical progress. This improvement of living conditions, among others, makes life easier on one’s own and reduces the interdependence of family members. As a result of the second demographic transition “[...] the family and child are less important than a couple or an individual.” The increase in the importance of alternative relationships for the family is evident (Slany, 2003, p. 31).

We will measure decreasing family capital by the ratio of divorces to existing marriages.¹⁰ We treat this relationship as an indicator of:

- (1) unstable family,
- (2) weakening of family ties (family capital),
- (3) weakening of family and social cooperation skills (including economic and professional ones),¹¹
- (4) increasing uncertainty and risk in people’s lives,¹² as it is impossible to fully replace family ties by the relationships with people outside the family circle.

In Poland, in the years 2016–2017, approx. 190,000 marriages, 40,000 less than at the beginning of the 1960s, were concluded. On the other hand, the number of divorces increased in this period three and a half times from approx. 18,000 to 65,000.

Not every divorce reduces family social capital. When there is a long-term conflict between spouses, when the marriage does not sufficiently fulfil important functions, when it does not provide attention, safety, and care, and it does not satisfy emotional needs, a divorce is a lesser evil than staying in marriage at any price.

In practice, determining the line beyond which the spouses should divorce is infinitely difficult. This difficulty results from the need to take into account the interest

¹⁰ As the number of couples who live together outside a formal relationship (cohabitate) grows.

It can also be argued that 40% of such couples become married (in the USA, according to Castells, 1997). Of these marriages, up to 50% end in divorce (cf. Slany, 2003, pp. 43–44). Hence, it can be assumed that one of the reasons for the growing phenomenon of divorces is a rising popularity of cohabitation which results in less durable marriages. Slany (2003) notes that cohabitation unions are not invested in (emotionally and materially, including children), whereas “[...] in the case of marriage, there is certainty that the investment is legally and socially protected” (pp. 44, 49).

¹¹ Paweł Starosta drew attention to this aspect during a conversation we had on November 19, 2008.

¹² “The family has an enormous social value [...] as a factor stabilising individual and social life” (Kocik, 2006, p. 63). The family’s tasks include, among others, “[...] providing all of its members with a sense of security and respect” as well as appropriate material conditions (cf. Zubrzycka, 1993, p. 97). Both tasks are very important for the effective participation of people in the creation of the domestic product.

of all family members, including children,¹³ not only during the divorce, but also later—until the end of their lives, and even the lives of the next generations.

We put forward the hypothesis that the weakening of family ties, measured by the frequency of divorces, resulted in a slowdown in economic growth in Poland.¹⁴ We will verify this hypothesis using an econometric growth model in which there are also other variables: investments, inflation and crime.

2. Family social capital

Social capital can be described as the potential resulting from the closeness of interpersonal relations and the strength of social bonds which serves social interests, and not only group or individual interests.¹⁵ Social capital is only partially measurable using many categories. Putnam (2000) distinguishes 14 such indicators and states that trust in other people dominates among them. It dominates in the sense that it is the most strongly related to other measures. The impact of trust on economic growth has been confirmed by Zak and Knack (2001).¹⁶

Many researchers have studied the impact of income inequalities on economic growth. If income inequality is not consistent with a sense of justice of a major part of society, it has a negative impact on interpersonal bonds and cooperation of people in economic processes. It seems very interesting to seek to determine the income unequal-

¹³ The interest of children is particularly difficult to determine, especially when children are not grown up. Then adults try to express the interest of children, as a result this interest is not usually sufficiently represented (cf. Wallerstein & Blakeslee, 1989).

¹⁴ Several discussants (e.g. Czyżewski) rightly see the need to explain also the divorce rate, i.e. the need for an analysis of a mutual impact between a family breakdown and economic growth. The results of estimating the inverse relationship are included in Appendix 1. The divorce rate was positively significantly related to the Gini coefficient (wage inequality) with lags of two, three, and four years, as well as with GDP per capita, and negatively correlated with GDP growth per capita lagged by two, three, four, five, and six years). Cf. "Divorce and Economic Growth..." 2008.

¹⁵ The line between the group and social interest is very difficult to draw practically. The social interest, it seems, can be identified with the common good. Following Gryżenia (2007), the common good will be understood as "[...] integral and full development of [each—J.J.S.] human being, realised in shared life, taking into account and using material resources", i.e. the conditions and limitations of social life. Human development, in the framework of the common good, provides man with knowledge, love and freedom. "Full development, both physical and mental, can only be achieved in the framework of participation in social life. [...] Members of society united by a common goal, renouncing a certain range of rights, gain other goods that they could not achieve without social coexistence."

A special common good is the national common good, which, I think, in economic terms is closely related to economic patriotism (cf. Koźmiński, 2008). According to Koźmiński, this patriotism should be based on building a competitive advantage, not on protectionism.

The family is the cradle of patriotism and the common good. Both these values are passed from generation to generation. It seems that economic patriotism consists in striving for the economic development of the country (nation) in the long-term, among others, to ensure the well-being of one's own family, also in the perspective of the next generations.

¹⁶ Zak and Knack's research was based on a sample of 32 countries. Their growth model is described in Sztudyinger (2005, pp. 72–74).

ity which is optimal for economic growth (more in Chen, 2003; Cornia & Court, 2001, pp. 23–24; Sztudynger, 2003, pp. 68–71).¹⁷

Another measure of negative social and moral capital¹⁸ is a crime, whose impact on economic growth in Poland has been confirmed (more in Sztudynger & Sztudynger, 2005, pp. 68–71). The influence of a typical social capital indicator—voter turnout—on economic growth in the territorial system has been also verified (Paszkiwicz, 2009).

Henderson has even introduced the term *love economy*, based on various forms of altruism, voluntary work, social and family cooperation, selfless care for children, elderly and sick people, respect for the natural environment and the rights of future generations, as well as protection of resources—human and natural ones (Pietila, 1997). Love is understood in this respect as a willingness to selflessly serve other people.¹⁹ The love economy is realised mainly in households, and its “products” include, among others, strong family ties as well as physical and mental health of family members.

The love economy is based primarily on social capital, and to a lesser extent on money and financial capital. Man’s goal and success are not primarily wealth and profit, but gaining lasting, good relationships and ties with other people,²⁰ among others, with family members. *Homo oeconomicus* does not take on the superior role. Smith (2006) emphasised this in the initial period of man’s activity:

How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it. (p. 11)²¹

In surveys, Poles were asked about the most important values they followed in everyday life. “Family happiness” was indicated more than four times often

¹⁷ Research for Poland, the USA and Sweden indicates that the income inequality optimal for growth was almost twice as high in the USA as in Poland and Sweden (Kumor & Sztudynger, 2007; Sztudynger, 2018). In Poland, wage inequality has been increasing since 1991 and at the end of the 1990s exceeded the optimal level for growth (Cf. Kumor & Sztudynger, 2007). Kowalik and Kozłowski (2007) emphasise that “Polish capitalism creates wealth for some, but it destroys society. In this sense, it is deeply immoral” (p. 15).

¹⁸ We will not deal with moral capital that characterises individuals. Moral capital consists of such features as justice, beneficence and temperance (cf. Ratnapala, 2003), as well as honesty and truthfulness, fulfilment of the agreements and keeping one’s word, reciprocity in relations with others and remembering about one’s duties (cf. Kochanowski, 2002, pp. A8–A9). If each of the cooperating persons is characterised by a high level of moral capital, it contributes to social capital.

¹⁹ Combining love with creativity seems interesting: creativity should be “understood not only as artistic or scientific activity, but as man’s entire fulfilment in love as a person.” The self-realisation of a person is the pursuit of something “new,” “non-existent yet.” (Przesmycki, 2002, p. 176).

²⁰ That is why, I think, John Paul II said: “earn a heavenly account, not an earthly bank account” (quoted after Póltawska, 2005, p. 25).

²¹ According to Twardowski (2007) “all sainthood consists in a fight against selfishness. This is a lifelong battle for the rest of your life, as it is extremely difficult not to think about yourself” (p. 257).

Janina Filek (2009) points out that Smith as “the creator of economics defeated the philosopher of morality, and the victorious attitude for eternity set a certain pattern of thinking about man (as *homo oeconomicus*) and determined the objective relation of man to man”. Above I have sought to present Smith’s moralising views.

than “prosperity and wealth”.²² This can be treated as confirmation of the dominance of the love economy. “For real happiness, man needs a family”—92% of Poles say that, and only 6% think that without a family, one can live happily (Centre for Public Opinion Research, 2008, p. 3).²³ It is not surprising then that Poles value the family the highest among all values, that it is the most important life goal (Kocik, 2006, pp. 73–76).

Family social capital (family capital) is understood as the ties between family members that serve their cooperation and are not at odds with the social interest. These ties are expressed in attitudes of respect, trust, love, interest, help and care for family members.

Becker (1976) created the economic theory of the family. He emphasised that such characteristics as honesty, reliability, solidarity, the capacity for cooperation and sacrifice, diligence, and fondness for order are formed in the family. Similarly, Fukuyama (1995) claimed that an environment that is particularly conducive to the emergence of trustworthy people is a well-functioning family. All these features are very useful in economic activity.

3. Several reasons for divorce

The destabilisation of the marriage and family is a result of general changes in values: from the traditional values such as a call for duty to the values of self-fulfilment (Mariański, 1997, p. 78).²⁴ The role of a woman has been dismantled, and her expectations of an equal position in her professional life and in married-family life have been aroused but not satisfied (Mikołajczyk-Lerman, 2006, p. 29).

In the emerging divorce mentality, marriage is not understood as a life-long choice but as a contract [...] on the mutual provision of services that can be terminated at any time. To some extent, it is an extension of the consumption mentality to marriage and family [...] and perceiving them as one of many “things” that one can have or not have, according to one’s preferences [...]. (Mariański, 1997, p. 75)²⁵

²² The respondents were able to point out some of the most important values they followed in everyday life. 78% indicated family happiness, and 18% prosperity and wealth (Centre for Public Opinion Research, 2008, p. 3).

²³ This was clearly expressed by an actor Jan Nowicki who said that “[...] there was no time for people [...] I paid the highest price for it—I paid with loneliness. A lack of pleasure derived from contact with family” (Jagas, 2008, p. 82). Kępiński (2015) wrote that “the joy of life is brought solely by giving love” (p. 92). Stuhr (2008) claims that: “[...] the family taught me and still teaches openness [...]” without it “[...] I would be a terribly hollow man” (pp. 258–259). And he writes about the strength the family has given him.

²⁴ Rosset’s monograph *Rozwody [Divorces]* (1986) has made a great contribution to the study of the family crisis.

²⁵ Similarities to buying on a whim consumption can be found here.

Mariański (1997) calls this phenomenon the mobility of marriage and family. “A marriage is concluded not so much according to the criterion of ‘till death do us part,’ but rather ‘temporarily,’ as long as love and affection continue” (pp. 74–75).²⁶

The weakening, disintegration, deinstitutionalisation of the family allows for relatively free decision making, but they do not protect against doubt and uncertainty (more in Mariański, 1997, p. 68 et seqq.).

In the post-modern world, there occurs the deinstitutionalisation of marriage, which “[...] ceases to be the only authorised ‘place’ of sexual activity (the separation of sex from marriage). The protest against sexual taboos is made in the name of freedom, progress, autonomy, self-expression, self-fulfilment, social reform, the abolition of restrictions and control. For some, it provides the evidence of the unlimited sexualisation of culture, the perpetuation of unlimited freedom, a lack of responsibility, dangerous individualism, the sign of the gradual disintegration of family life, and its decadence, while for others it is the pursuit of normality, and even a yardstick of postmodernisation” (Mariański, 1997, pp. 75–76).²⁷

Becker (1990, p. 411) believes that the tendency to divorce is the greater the smaller the importance of “specific investments”, including children²⁸, acquired knowledge of the partner’s habits and views.

Mariański (1997, p. 78) formulates the thesis that deinstitutionalisation processes affect the marriage more than relationships between parents and children. However, this thesis raises some doubts. Although couples more often live together without marrying, a number of institutions replace parents and often weaken their relationships with children (nursery, kindergarten, summer camps, extracurricular education institutions, orphanages, retirement homes, nursing homes, etc.). Parents, devoting time to themselves—their professional career, hobbies, recreation, education—are willing to entrust children to these institutions. Similarly, later, adult children devote time to their own pursuits and not to their old parents, placing them in care homes for seniors. Also, the pension system provides income for elderly people, making them independent from their children’s material help.²⁹ It can be said that there is a **substitutional institutionalisation** in relation to the institution of family, especially with regard to its caring functions.³⁰ Replacing the family in its functions makes it seem less needed. It is easier then to make a decision about divorce.

²⁶ Other term would be “the unstable of marriage and family.”

²⁷ The estimate of the proportions of both attitudes is provided by a survey conducted in 2006 among French single men aged 18–65. Over half of these men dream of a lifelong relationship with a woman. Only 11% of the respondents indicated casual affairs (Grabowska, 2008, p. A23).

²⁸ The specificity of such investments lies in the fact that in the case of separating a child from one of the parents, the pleasure felt by the child is smaller (Becker, 1990, pp. 432–433).

²⁹ Andrzej Kacprzyk drew my attention to the role of the pension system (cf. also Kocik, 2006, p. 358).

³⁰ The analysis of the choice between supporting the family or developing the institutions taking over its functions was carried out by Kropiwnicki (2002, pp. 330–331).

4. Several consequences of divorce

Giddens (1991) emphasises that after a divorce many people

[...] lose confidence in their own judgements and capabilities, and may come to feel that planning for the future is valueless. They sense that life gives hard knocks and is essentially unpredictable; they conclude that the best-laid plans go awry and become discouraged about setting long range or even short-range goals, much less working towards these goals. (p. 17)

According to Wallerstein and Blakeslee (1989), the effects of divorce and their durability are underestimated. Most often a divorce improves the situation of at most one of the ex-spouses (more often a man). One of the most important, unexpected by the authors, conclusions is that the biggest losers are the children. "Children of divorce grow up with the notion that love can be transient and commitment temporary, but all children—even those raised in happy, intact families—worry that their families may come undone as well" (p. 307).³¹

Divorced people usually earn less than working people with similar qualifications and positions. Lower earnings result in lower saving rates. In addition, saving rates decrease with the lower number of people in the household, which is a consequence of the divorce.³² A decrease in saving rates leads to a fall in investment, which in turn slows down economic growth.

The social status of a divorced man is worse than the status of a married one and a bachelor, although better than a divorced woman (cf. Gapik, 1989, quoted after Mikołajczyk-Lerman, 2006, p. 54). The fall in the status of divorcing spouses can be explained by their failure to fulfil a very important, if not the most important, role in life. This limits the trust of other people in them and in whether they will be able to meet other important social, professional and family roles.

³¹ 52 families—ex-spouses and their 110 children—were surveyed in California in the years 1971–1983. For over 90%, it was the breakup of their first marriages. The study was conducted during the divorce period and then five and ten years after the divorce.

I would like to quote the final part of the book written by Wallerstein and Blakeslee (1989, p. 308): "When six-years old John came to our center shortly after his parents' divorce, he would only mumble, 'I don't know.' He would not answer questions; he played games instead. First John hunted all over the playroom for the baby dolls. When he found a good number of them, he stood the baby dolls firmly on their feet and placed the miniature tables, chairs, beds, and eventually all the playhouse furniture on their heads. John looked at me, satisfied. The babies were supporting a great deal on their heads. Then, wordlessly, he placed all the mother dolls and father dolls in precarious positions on the steep roof of the dollhouse. As a father doll slid off the roof, John caught him and, looking up at me, said, 'He might die.' Soon all the mother and father dolls began sliding off the roof. John caught them gently, one by one, saving each from falling to the ground.

'Are the babies the strongest?' I asked.

'Yes,' John shouted excitedly. 'The babies are holding up the world.'"

³² Liberda (2000) indicates how the saving rate in Poland grows with the increase in income and the increase in the number of people in the household (pp. 87–91).

Divorce is most often associated with the restriction of parental functions of one or both parents. And yet spouses, or former spouses, never cease to be parents. This limitation of parental functions violates the child's right to live in a full family, which, in my opinion, may be considered as a violation of the child's dignity.³³ Bauman (2008) states that:

[...] the life worthy of a human being and the respect a human being is entitled to due to its humanity constitute the highest value that cannot be overridden or compensated for by any other values, even the richest and the most diverse ones; also, and mainly because all other values are values in so far as they serve human dignity, its defense and cultivation. (p. 338)³⁴

The above-presented considerations make us hypothesise that a stable family is a necessary condition for stable economic growth due to the fact that:

- (1) it exerts a medium and long-term impact on adult working family members; we will attempt to capture this impact in the econometric model;
- (2) it exerts an intergenerational impact³⁵—on children³⁶ (more than long-term, multi long-term one); this impact will not be described in our model, as this would require the use of long-term (5–10-year) data from many countries as well as a longitudinal and cross-sectional sample.

We hypothesise that the weakening of family ties, measured by the intensification of the divorce phenomenon, has resulted in a slowdown in Poland's economic growth.³⁷

5. Divorce relationship to existing marriage

The intensification of the divorce phenomenon will be measured by the ratio:

$$divr = div / mar$$

³³ Bauman (2007) emphasises that “dignity is a human invention. Dignity is man's humanity” (p. 336).

³⁴ Półtawska links dignity with honour and faithfulness, adding: “yet without faithfulness there is no trust” which allows a person to live. In her opinion, family abandonment is a disaster for everyone (2005, pp. 11–12).

³⁵ At the 8th Congress of Polish Economists in November 2007, Sadowski recognised a lack of intergenerational analyses as the main weakness of economic sciences. I think that the lack of such analyses is not accidental. In intergenerational analyses, the long-time that passes between cause and effect makes it very difficult to carry out the empirical verification of relationships.

³⁶ This is referred to as “investments in children” (mentioned, among others, by Slany). The period of such investment is usually from 15 to 25 years (from birth to undertaking employment by the child). These investments determine the level of a young person's education, physical and mental health, as well as material resources and the image of the family and family name (family and social capital). A family breakdown and divorce limit all these investments. This means that a young person starts work from the level of lower social and human capital, and thus generates lower production (the comment made by J. M. Sztudynger).

³⁷ Next, we intend to examine the strength of family ties measured by women's fertility. Both of these measures are subject to certain fluctuations, having a source in demography—in the differences in the population number of successive generations.

where:

- div* the number of divorces in thous.
mar the number of existing marriages in mil.
divr divorce rate i.e. number of divorces on 1000 existing marriages.

Divorce rate depends on the age structure of the population and changes in the divorce law. It takes values from the two to nine range.

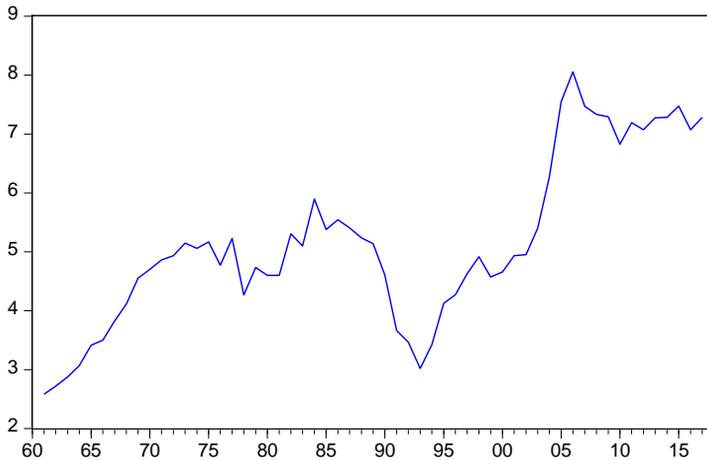


Figure 1. Divorce rate

Note. Adapted from the Central Statistical Office of Poland data.

The graph shows the family divorce rate in the years 1960–2016. The following stages can be distinguished:

- (1) the first period of growth until the mid-1970s,
- (2) the period of stabilisation: 1975 to the mid-1980s,
- (3) the period of decline: from the mid-1980s to 1993,
- (4) the only period of rapid growth from 1994 to 2006,
- (5) a small decline and stabilization from 2007 to the end of the investigated period.

6. Family social capital and the economic growth model

The impact of the divorce rate on economic growth is examined based on the labour productivity function:

$$\overset{\circ}{(GDP/L)}_t = A_t + \beta(\overset{\circ}{invest/GDP})_t - f(\overset{\circ}{divr}),$$

where:

<i>GDP</i>	gross domestic product,
<i>L</i>	labor (number of persons employed),
<i>GDP/L</i>	GDP per person employed,
<i>invest</i>	investments,
<i>invest/GDP</i>	investment rate—gross fixed formation as a percentage of GDP,
<i>divr</i>	divorce rate,
<i>A</i>	total factor productivity.

To smooth agriculture fluctuations I use endogenous variable as two years average. In the similar manner all other variables were transform to two or more years averages.

$$\begin{aligned} (\dot{GDP}/L)_{t,t-1} = & 0.13\Delta(invest/GDP)_{t,t-1} + 0.74 \sum_{i=1}^{i=4} divr_{t-i} \\ & - 0.03 \left(\sum_{i=1}^{i=4} divr_{t-i} \right)^2 + 0.16(marriar_{t-1} - marriar_{t-7}) \end{aligned}$$

$$R^2 = 0.882 \quad S_e = 0.60 \quad DW = 2.12$$

where:

<i>marriar</i>	marriage rate, i.e. number of new marriages on 1000 existing marriages
dots	mean growth rates.

The values of Student's t-statistic are above 2.6, so all structural parameters are significant with probability 0.98 or higher.

The divorce rate was introduced parabolically. This allowed me to determine the rate of divorce optimal for economic growth.

Equation confirms the negative impact of the disintegration of family social capital on labour productivity. The divorce rate occurs with a lag of one, two, three and four years. On average, in the considered period, the slowdown amounted to approximately 0.6 percentage point. The real average labour productivity growth rate in the analysed period was of the order of 3.3%. From the model, it follows that if the family disintegration had not been growing, the rate would have amounted to approx. 3.9%.

This model shows the effects of an increase in the divorce in Poland in the years 1995–2017. If the divorce had not been increasing since 1995 (it amounted to 38 tous. and to 65 tous.in 2017), in 2017 GDP would have been approx. 25% higher. This means that as a result of the growing divorces between 1995–2017, six years of dynamic economic growth have been lost.

I am particularly interested in the components that link parabolically an increase in labour productivity rate with the divorce rate:

$$(G\dot{D}P/L)_{t,t-1} = 0.74 \sum_{i=1}^{i=4} divr_{t-i} - 0.03 \left(\sum_{i=1}^{i=4} divr_{t-i} \right)^2$$

The parabola reaches the maximum for the divorce rate of 4.1. In the years 1995–2017, the slowdown in economic growth due to a significant increase in the divorce rate seem to be overestimated. This can be explained by the assumption that the optimal divorce rate was constant over time, while it can be assumed that it shows a tendency to increase as the role of marriage decreases.

7. Conclusions

The weakening of family ties and divorces belong to the sphere of the private life of every human being. My intention was not to violate this privacy. It is worth, however, realising that, apart from the painful, individual dimension, this problem has also a general social and macroeconomic dimension. It results, among others, in a slowdown of economic growth whose effects have an impact on each of us, even if we belong to the most ideal family.³⁸

The research confirms the impact of the divorce rate on a slowdown in economic growth. We confirmed that the intensification of the divorce causes a periodic (temporary) decrease in the rate of economic growth. On the basis of this assumption—based on model (1)—we can conclude that in the years 1975–2017 an average annual slowdown of economic growth caused by divorce was of the order of 0.6 percentage point. If not for this slowdown, the average annual GDP growth would have amounted to 4.3%. This meant a slowdown of economic growth of more than one-fifth.

On the basis of the model a reduction in the divorce rate from the current level of would give a permanent acceleration of economic growth. Further reduction in divorce rate would slow down the “current” economic growth. The model has been constructed in such a way that it leads to a specific recommendation of a certain number of divorces. As has already been mentioned, the negative inter-generational effects of divorce are not taken into account here.

The hypothesis has been confirmed, assuming that there is an optimal divorce rate for growth—that some marriages are so ill-conceived that they should end in divorce,³⁹ seems more likely.

In further research, we will also take into account the reverse relationship—the impact of economic growth on divorces.⁴⁰ Then it will be possible to cap-

³⁸ As it seems, this statement cannot be included in the so-called “ideology of growth,” which is one of the causes of the crisis of values. In this ideology, it is emphasised that the most important is economic growth, and broadly understood values, including family values, are ignored or treated as secondary. We, on the other hand, say that the crisis of family values causes a slowdown in economic growth.

³⁹ Janina Godłów-Legiędz calls a divorce in such marriages “a lesser evil.”

ture the interdependencies: the intensification of the phenomenon of divorce slows down economic growth, which results in an increase in the number of divorces,⁴¹ etc. There is, therefore, a negative spiral intensifying the mutual impact of economic growth and divorces (family disintegration).

Sójka at the conference “Ethics in Economic Life” in May 2005 poses the question: “Does *homo economicus*—an individual’s aspiration to maximise one’s benefits⁴²—stand in contradiction to ethics as a reflection on human obligations, the way to strive for good, justice and human rights [...]?” The article assumes that the fulfilment of family responsibilities and striving for the happiness of the whole family are important goals for people. We have formulated the hypothesis that the rate of achievement of these goals is decreasing, which we indicate by pointing to an increase in the phenomenon of divorce. This slows down economic growth and hence interferes with *homo oeconomicus*. We have shown this on the scale of the economy as a whole. The question remains whether it can be seen on a single person or family scale. Can a person see that the breakdown of his or her family hinders and slows down the pursuit of maximising his or her own economic benefits?

The conclusion I seek to draw from this text is as follows: **A permanent marriage and family, as an important factor ensuring a stable and dynamic development of the economy, is important for using the potential of the entire economy. Family values⁴³ support *homo oeconomicus* and do not compete with it. Family values are a necessary condition for an efficient economy and economic success.**

In the article, we have sought to show that the weakening and breakdown of the family have slowed down economic growth in Poland. This is only one of the many negative dimensions of the influence of the weak family on each of our lives. Therefore, one should agree with the sociologist Slany (2003) stating that:

Significance should be restored to the marriage and family. Reconstruction should be carried out by families themselves, the church, neighbourhood groups, the mass media, and not by state subsidies or government programmes [...]. The family has existed for thousands of years, but it has turned out that in modern times it is something extremely fragile. It should be supported and its universal values should be emphasised. After all, it is the basis of our existence, the foundation of our morality and the foundation of the social organisation. The family is the most powerful social capital; its formation is and should be the most important type of investment in social capital. (pp. 49–50)

⁴⁰ The estimation of the divorce equation are included in Appendix 1.

⁴¹ These interdependences are characterised by significant lags of up to nine years.

⁴² Twardowski (2007, p. 257) calls the struggle with one’s own selfishness the pursuit of sainthood.

⁴³ Jacek Filek (2005) says that: “the values are not only recognised by ‘understanding’ their content [...] but values are also felt”, and man is willing to follow these values in life. The act of opening to the values is a total act of the entire person (p. 39).

The purpose of my analysis is to better understand the importance of the family and stimulate the will oriented towards family values. The sphere of feeling the values should be beyond the scope of considerations as one that cannot be treated objectively.

In the presented models, we do not take into account the diverse intergenerational effects of divorce. They include, among others, the weakening of trust in loved ones, parents, and as a consequence, the weakening of trust in other people, which is destructive to social capital and rebounds on many people.

A divorce is usually a statement that one cannot live with one's spouse, that it is not worth living together. Abandoning the family by a husband or a wife is tantamount to the abandonment of children by one of the parents, even if the divorce is accompanied by an assurance that this is not true. It is difficult for a child not to think that "[...] father abandoned not only my mother but me too [...]". This weakens the child's self-confidence, which makes it difficult to acquire knowledge and improve human capital. I think that this aspect is not sufficiently strongly emphasised in the considerations of sustainable growth. This kind of **growth is growth that does not damage the natural environment, but also does not destroy interpersonal relationships and the social environment, in particular, the family environment.**

In conclusion, I will quote three thoughts. Erich Maria Remarque: "No one can become stranger than the person you once loved." And this happens to divorced spouses. Georges Sand: "There is only one happiness in this life, to love and be loved." This happens easily in stable and good families.

Appendix

The values of Student's t-statistic are above 3.4, so all structural parameters are significant with probability 0.98 or higher. The only exception is parameter 2.0 significant with probability 0.93.

Divorce ratio equation, 1970–2017 sample

$$\begin{aligned} \text{divr}_t = & \\ = 1.63 - 2.0 \text{GDPpc}_{t-2} - 2.9 \text{GDPpc}_{t-4,5} + 0.04 \sum_{i=1}^{i=4} \text{gini}_{t-i} + 0.05 \text{marriar}_t & \\ & + 0.67 \text{divr}_{t-1} \end{aligned}$$

where:

GDP_{pc}	GDP per capita,
divr	divorce rate, i.e. the share of the number of divorces in the existing marriages (%),
GINI	coefficient of income inequality in %.

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