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# PECULIARITY OF HYBRID ENTREPRENEURS – REVISITING LAZEAR'S THEORY OF ENTREPRENEURSHIP

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**Abstract.** The aim of this study is to explore and elaborate the concept of hybrid entrepreneurship, i.e., a simultaneous mix of self-employment (entrepreneurship) and salary employment. Lazear's theory of entrepreneurship is assessed in terms whether it can explain the phenomenon of being a hybrid entrepreneur. The hypothesis is that the probability of linking a salary job with one's own business increases with the variety and level of education gained, the broadness of professional and management experience but also the level of entrepreneurial self-efficacy. The hypotheses are tested with multivariate logistic regression, using survey data gathered from 1600 entrepreneurs. In light of the results, Lazear's theory cannot be unambiguously extended to the case of hybrid entrepreneurs. Although the probability of being a hybrid entrepreneur increases with broader professional and managerial experience, at the same time it diminishes as the level and diversity of education increase. The results suggest that hybrid entrepreneurs are an importantly discrete population and therefore need to be treated separately. The theoretical and practical implications of the results are discussed.

**Keywords:** hybrid entrepreneurship, part-time entrepreneurship, Lazear's theory of entrepreneurship, jack-of-all-trades, entrepreneurial skills, career choice.

**JEL Classification:** L26, J24.

## Introduction

The ever-changing labour market, with its tendency to activate non-standard working arrangements and to create temporary jobs (Fayard, 2019), has brought a new employment phenomenon into the research spotlight, termed hybrid entrepreneurship (Folta et al., 2010), or, less often, part-time business (Smallbone & Welter, 2001; Petrova, 2012) or second job entrepreneurship (Gruenert, 1999). This new phenomenon is a simultaneous mix of self-employment and salary employment as individuals start their ventures while retaining a

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salary job. Therefore, it enables an individual to realize his or her entrepreneurial potential while being financially and socially secured by an employer (and with limited personal risks). The novelty of hybrid entrepreneurship as a research concept has resulted in a wave of publications which are mainly trying to explore the motives or intentions of this career path (Petrova, 2011, 2012; Folta et al., 2010; Thorgren et al., 2014, 2016; Dzomonda & Masocha, 2018), the practical mechanisms behind it (Burmeister-Lamp et al., 2012), the passion around it (Nordström et al., 2016), the transition into hybrid entrepreneruship (Ferreira et al., 2018) or the risk attitudes of hybrid entrepreneurs (Raffiee & Feng, 2014). They all seem to agree on the distinctiveness of hybrid entrepreneurs, but they also highlight the heterogeneity of this group and the necessity to continue research endeavours to understand better their specifics. In this sense, the concept of hybrid entrepreneurship has been given a meaning in entrepreneurship research, but it has not been discussed deep enough (Folta et al., 2010), particularly in the area of hybrid entrepreneurs' knowledge and skills sets, which are constantly being developed through their doubled career experiences.

To build the theoretical framework for such a discussion, Lazear's theory of entrepreneurship was chosen (Lazear, 2002, 2005). This theory, in contrast to other neoclassical economic theories, acknowledges entrepreneurs in economy (Saiz-Alvarez, 2019). It is recognized as being one of the two most influential explanations of individual selection into entrepreneurship (Hsieh et al., 2017), representing alternative view to the risk aversion theory (Kihlstrom & Laffont, 1979). The theory refers to human capital, contemporary considered as a key success factor in entrepreneurship (Velasco, 2012; Gomezelj & Antončič, 2014). It considers that individuals with a balanced but diversified combination of skills and knowledge, collected from diverse sources and domains, are more likely to become entrepreneurs. In contrast, wage employees more often choose the career of specialists in fields demanded by the labor market. Surprisingly, in Lazear's study, but also in his followers' wide body of research, the group of hybrid entrepreneurs has been largely ignored, although the phenomenon of hybrid entrepreneurship directly relates to labour choices. In consequence, there is no knowledge on how the broad experience of this unique group of entrepreneurs characterises their career choices.

The aim of the paper is to fill this research gap and therefore explore and elaborate the concept of hybrid entrepreneurship through the verification of Lazear's theory of entrepreneurship. To find the essence of hybrid entrepreneurship, hybrid entrepreneurs are juxtaposed with "pure" entrepreneurs (with full immersion into self-employment). The differences between these two groups are extracted to draw a more accurate portrayal of hybrid entrepreneurs regarding their accumulated skills, knowledge and experience. Contrasting one sample against another seems to be the optimal solution when phenomena under investigation is weakly recognized and underexplored, as in the case of hybrid entrepreneurship. To gain more knowledge and understanding on hybrid entrepreneurship, the hypothesis is stated that the probability of being a hybrid entrepreneur increases with the variety of education gained, the broadness of professional, management and life experience but also with the level of entrepreneurial self-efficacy, since, following Tegtmeier et al. (2016), the perception of skills may be as important as the skills *per se*, therefore may have a significant impact on entrepreneurship entry mode. Being able to indicate systematic differences between "pure"

and hybrid entrepreneurs results in contribution and implications both for theory and practice of entrepreneurship.

In its theoretical dimension, this paper contributes to the existing literature in two ways. Firstly, by exploring the influence of skills, knowledge, and experience on the likelihood of being a hybrid entrepreneur, the paper brings a deepened understanding of the phenomenon of hybrid entrepreneurs and their career choices. Secondly, the aim is to contribute to the ongoing discussion on Lazear's theory of entrepreneurship (2002, 2005). The theory has not been confronted with the group of hybrid entrepreneurs. However, the group is specific enough (because of hybrid entrepreneurs' accumulated experiences due to simultaneous careers as entrepreneurs and salary employees) to create an interesting area for scientific inquiry revisiting this well-established entrepreneurship theory. Continuing investigation on hybrid entrepreneurship is also justified if it is considered how often this phenomenon appears in practice (Thorgren et al., 2014) and that hybrid entrepreneurs have a much lower chance of a hazardous exit (Raffiee & Feng, 2014). Following the study of Burke et al. (2008), individuals who enjoy both self-employment and salary work significantly outnumber "pure" entrepreneurs. At the same time, in a scientific discourse and empirical studies this group of entrepreneurs is marginalised.

In practice, hybrid entrepreneurship might be also seen as a solution to break the dichotomy of entrepreneurship and salary employment. Its potential could be particularly acknowledged when data on latent entrepreneurs, i.e., individuals who declare preferences for self-employment over employment, are analyzed. The Global Entrepreneurship Monitor (Global Entrepreneurship Monitor, 2018) announced that in European economies in 2017, total early-stage entrepreneurial activity was 10.84% (the percentage of the 18–64 population who are either nascent entrepreneurs or owner-managers of a new business) and the indicator of entrepreneurial intentions reached 19.38% (the percentage of the 18–64 population who are latent entrepreneurs and intend to start a business within three years). At least some of the latent entrepreneurs may first consider becoming hybrid entrepreneurs and only then scale up their businesses and grow. Therefore, from the perspective of policy focused on promoting entrepreneurship, knowing more on hybrid entrepreneurs may help to better support individuals in their incremental transition to become "pure" entrepreneurs, in particular, if more insights into the types and scope of their professional experiences and skills are gained. However, so far, public policy tends to disregard hybrid entrepreneurs (Folta et al., 2010; Schulz et al., 2016) and the discourse on this group of entrepreneurs is very silent, although in light of the research they seem be to be more responsive to any policy regulation than their "pure" counterparts (Schulz et al., 2016).

The paper is structured as follows: the first section contains a review of the theoretical and empirical findings on hybrid entrepreneurship and addresses the gap in this research area. In the next chapter, Lazear's theory of entrepreneurship and its implications for the study in terms of hypotheses are presented. The subsequent section describes the methodology and data. After this, the results and findings on hybrid entrepreneurship are discussed in the context of Lazear's theory. The paper ends with concluding thoughts and implications.

## 1. Hybrid entrepreneurship

Traditionally, entrepreneurship is regarded as a quite dichotomous phenomenon, where individuals are categorized as either entrepreneurs or non-entrepreneurs (Gartner, 1988). With the development of the field, researchers focused more on discovering the nuances of the entrepreneurial process and stopped conducting comparative studies between entrepreneurs and non-entrepreneurs, recognizing the distinction and large heterogeneity of both groups (Bögenhold, 2018). However, still one important phenomenon, which is part of both sets, was largely missed – hybrid entrepreneurship.

Hybrid entrepreneurs are usually defined as "individuals who engage in self-employment activity while simultaneously holding a primary job in wage work" (Folta et al., 2010, p. 254). The group of hybrid entrepreneurs rejects traditional entrepreneurial choice theories (Evans & Jovanovic, 1989; Dunn & Holtz-Eakin, 2000) as they do not have to choose between paid jobs and self-employment anymore (Petrova, 2012). They can split their time between the two options. Nevertheless, so far, hybrid entrepreneurs have not been investigated enough and, as a result, the knowledge about their specifics, particularly in comparison with full-time entrepreneurs, is scarce. One of the explanations for this situation could be the low availability of empirical data, as this employment category does not appear in official labour statistics in most world economies. Also, in many systematic studies, hybrid entrepreneurs were categorized into mutually exclusive sets as self-employed or wage workers (Folta et al., 2010).

Entrepreneurial entry is a result of an individual's general choice to become an entrepreneur (Knatko et al., 2016). A decision to become hybrid entrepreneur has many advantages. According to the research, entering "pure" entrepreneurship via hybrid entrepreneurship increases the chances of business survival (Raffiee & Feng, 2014) and the cost of business exit has less sunk cost (O'Brien & Folta, 2009). Interestingly, the study of Schulz et al. (2017) shows that being entrepreneur as a second job increases the probability of higher earnings in this second job, if compared to being employed in both occupations. What is also highlighted in literature is the benefit of learning process about the business that hybrid entrepreneurs may benefit from with less risk, as well as their more time to generate entrepreneurial experiences and accumulate business knowledge. In consequence, individuals who decide on full immersion into self-employment in a staged process via hybrid entrepreneurship survive longer than those who enter self-employment directly from a salary job (Raffiee & Feng, 2014) without this transitory stage. However, despite these numerous benefits of hybrid entrepreneurship, the broader socio-demographic portrayal of this group of entrepreneurs remains blurry.

The group of hybrid entrepreneurs tends to be divided into subgroups. The most common division relates to the criterion of whether hybrid entrepreneurship is just an entry phase and a mid-point on the way to becoming a full-time entrepreneur (regarding it as a transition period, mainly in the process of nascent entrepreneurship) or this transition is not planned (Viljamaa & Varamäki, 2015; Thorgren et al., 2016, Viljamaa et al., 2017). In this vein, hybrid entrepreneurship is seen as a two-stage process, where, during the first step, entrepreneurs decide whether to engage in a business start-up, and in the second step, they decide whether to leave salaried employment and become full-time entrepreneurs (Thorgren et al., 2016). Swinging between a paid job and one's own business requires a unique combination of skills

and time management. However, if the entrepreneur decides not to leave a salary job, it also calls into question the possibility of the growth of the company that he or she owns (Brown & Farshid, 2017).

Two of the most frequent research questions relating to hybrid entrepreneurs are why they decide to have their own business parallel to salary work (Thorgren et al., 2014) and what makes them (hybrid) entrepreneurs (Blanchflower & Oswald, 1998). In general, individuals choose to become hybrid entrepreneurs for monetary and non-monetary reasons. Among the former some individuals decide on hybrid entrepreneurship due to financial constraints, because of a need to maximise income or in order to diversify financial risk. Among the later, psychological reasons dominate, like social recognition or self-realization (Folta et al., 2010; Block & Landgraf, 2016), but the choices could be also explained by the work place or sector specifics.

Petrova (2012) tested the hypothesis that the reason for the existence of part-time entrepreneurship is that people are credit constrained (entrepreneurs work as salary employees to finance their businesses). However, according to her findings, hybrid entrepreneurs are not affected by financial constraints. In another study, Petrova (2011) argues that individuals become part-time entrepreneurs to self-test their entrepreneurial ability ahead of time (while having a salary job). Folta et al. (2010) share a similar understanding, explaining that more risk-averse entrepreneurs rationally choose hybrid entrepreneurship to decrease their sunk commitment while they examine their entrepreneurial capabilities. Other studies try to investigate the specifics of hybrid entrepreneurs. In the light of Jenkins, Wiklund and Brundin's (2014) study, hybrid entrepreneurs are less likely to appraise the failure as involving self-esteem loss (although it was not the case for financial strain). Raffiee and Feng (2014) see hybrid entrepreneurship as a way to reduce risk and uncertainty associated with business set-up and survival on the market.

All these studies have contributed to better understanding of hybrid entrepreneurship but, above all, made it clear that this group of entrepreneurs is specific enough to require more focus due to its meaning for the economy and individuals' development.

## 2. Lazear's theory of entrepreneurship and hybrid entrepreneurs

In the contemporary competitive environment, the emphasis is given the knowledge and skills of the workforce (Pérez-Bustamante Ilander et al., 2016). Theoretical framework of the paper is built around Lazear's theory of entrepreneurship, which explains and predicts who becomes an entrepreneur. This theory, which considers maximizing one's lifetime income as a key motive for professional choices, assumes that entrepreneurs need to be competent in many and balanced skills and have at least basic knowledge in numerous areas (Lazear, 2005). Individuals with more diverse skill sets, but also those who have more varied careers (having more professional experiences or performing more roles at work) are more likely to become entrepreneurs. As Lazear (2005, p. 676) explains:

> *Although not necessarily superb at anything, entrepreneurs have to be sufficiently skilled in a variety of areas to put together the many ingredients required to create a successful business. As a result, entrepreneurs tend to be more balanced individuals.*

Lazear's theory centers around the so-called "jacks-of-all-trades". Its main hypothesis states that entrepreneurs need sufficient skills and knowledge in a variety of areas to succeed, while paid employees benefit from being specialists/experts in a certain area that is demanded by the labour market. Lazear tested the theory on Stanford alumni. The data on about 5000 alumni (40 per cent response rate) included information on their postgraduate work experience and incomes, as well as on courses taken when they were students at the Stanford Graduate School of Business. In light of the results that Lazear obtained, Stanford alumni entrepreneurs had studied a more diversified curriculum than those who were employees, and they had a greater variety of roles in their professional careers before becoming an entrepreneur. Therefore, results confirmed the hypothesis that individuals who have more varied careers (performed more roles and gained more experiences) and more diverse skills are more likely to become entrepreneurs. Lazear (2005) provides two explanations for his findings. The first explanation states that the dependency between the number of roles and entrepreneurship is a consequence of differences in skills across populations (individuals with more general skills are able to perform more roles). The second explanation says that this dependency is a result of mindful investment, as individuals planning to become entrepreneurs try numerous roles in order to gain the knowledge and skills necessary to start their business. Although Stanford MBA Alumni may not be representative sample for all other individuals all over the world (Wagner, 2003), Lazear's theory was confirmed in many further studies, for example: Åstebro and Thompson (2011), Backes-Gellner and Moog (2013), Hartog et al. (2010), Stuetzer et al. (2013), Wagner (2003, 2006). To some extent it was confirmed by Lechmann and Schnabel (2014), who agreed with Lazear's view on a multi-skilled entrepreneur but did not agree with Lazear's view on different human capital investment patterns of entrepreneurs and salary employees, or by Spanjer and Witteloostuijn (2017) who find that entrepreneurial performance depends on industry experience but not necessarily on entrepreneurial experience. However, there are also opposing voices raised. For example, Silva (2007) did not find any support for Lazear's "jack-of-all-trades" hypothesis. Regardless of the results, the studies referred to above were performed on very diverse groups, like nascent entrepreneurs (Wagner, 2006), inventor-entrepreneurs (Åstebro & Thompson, 2011), women (Tegtmeier et al., 2016), graduates (Lazear, 2002, 2005), and university students (Backes-Gellner & Moog, 2013). However, so far, despite the importance of hybrid entrepreneurs for entrepreneurship practice, there are no studies challenging Lazear' theory on a group of hybrid entrepreneurs.

What is not often included in studies relating to Lazear's theory is a self-efficacy construct. This term is well developed in psychology and was later on successfully transmitted to entrepreneurship research and named entrepreneurial self-efficacy (ESE). Self-efficacy, being self-regulatory construct (Bryant, 2007), stems from social cognitive theory where psychosocial functioning is explained as a triadic reciprocal causation of behaviour, personal factors (e.g., cognitions), and environmental events (Wood & Bandura, 1989). It is typically defined as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2). Bandura (1997) describes self-efficacy as concerned with people's beliefs in their capabilities to produce given attainments. In the context of entrepreneurship, the concept of self-efficacy represents an individual's perception

that he or she is able to successfully perform the tasks and roles of an entrepreneur (Chen et al., 1998); it is a personal belief and judgments of one's own skills and abilities to achieve entrepreneurial goals (Baron et al., 2016). In entrepreneurship field, self-efficacy has been related to the discussion on entrepreneurial intentions (Barbosa et al., 2007; Boyd & Vozikis, 1994; Douglas & Fitzsimmons, 2013; Zhao et al., 2005), entrepreneurial opportunities (Boudreaux et al., 2019; Tumasjan & Braun, 2012), risk preference (Barbosa et al., 2007), or entrepreneurial intuition (Blume & Covin, 2011; Kickul et al., 2009). Therefore, it has been proved to have significant meaning for entrepreneurship entry mode. In this paper, following the logic of Tegtmeier et al. (2016), it is argued that it is not only sound skills but also the perceptions of these skills that are important in entrepreneurial career choices. Hence, next to rich professional and management experience, and diverse education, an entrepreneurial self-efficacy as a factor potentially influencing the probability of someone becoming an entrepreneur was added to Lazear's model.

To the set of factors influencing entrepreneurial career choice, life experience was also added, as social life (represented by being active in number of life activity areas, such as sports, hobbies, social activities, charities, volunteering, political activity, traveling as well as participation in cultural and religious life) may, next to professional experience, also impact individual selection into entrepreneurship.

In this paper the question of the influence of skills, knowledge, and experience on the likelihood of being a hybrid entrepreneur instead of a full-time entrepreneur is raised. The hypothesis is that hybrid entrepreneurs, whose experiences accumulate due to their simultaneous careers as entrepreneurs and salary employees, are even stricter form of "jacks-of-all-trades". Individuals usually acquire experience in paid employment before starting their own business and becoming hybrid entrepreneurs (Xi et al., 2017). They use this time to gain business-related skills, to accumulate funds and to develop professional networks (Solesvik, 2017). Through part-time entrepreneurship, hybrid entrepreneurs gain business knowledge before committing to "pure", full-time entrepreneurship (Raffiee & Feng, 2014; Thorgren et al., 2016; Wennberg et al., 2006). Therefore, it is assumed that, in general, hybrid entrepreneurs have broad professional experience and rich education (due to higher chances of receiving professional training related to their paid jobs). What may be also expected is that hybrid entrepreneurs have higher and more balanced skills than "pure" entrepreneurs, as they need to switch between different roles and face diverse challenges and responsibilities (Thorgren et al., 2014). Regarding entrepreneurial self-efficacy, two patterns are possible ex-ante. Hybrid entrepreneurs may show higher self-efficacy as they see themselves as being competent and strong enough to continue both running their business and salary work. This explanation finds its confirmation for example in Tegtmeier et al. (2016) study on women entrepreneurs. On the other hand, they may also present lower esteem for their own entrepreneurial skills; hence, they hedge against possible bankruptcy by keeping their (relatively) safe salary job positions. In light of Raffiee and Feng (2014) study, individuals who have low self-evaluation are more likely to become hybrid entrepreneurs. As the previous empirical results are not conclusive, the hypothesis is that the probability of being a hybrid entrepreneur increases with higher level of entrepreneurial self-efficacy.

Taking all these into account, it is assumed that hybrid entrepreneurs fall into Lazear's theory. Therefore, the study develops Lazear's theory on the group of hybrid entrepreneurs by testing the following hypotheses:

*H1: The probability of being a hybrid entrepreneur increases with higher and more diverse education.*

*H2: The probability of being a hybrid entrepreneur increases with broader professional experience.*

*H3: The probability of being a hybrid entrepreneur increases with broader management experience.*

*H4: The probability of being a hybrid entrepreneur increases with broader life experience.*

*H5: The probability of being a hybrid entrepreneur increases with higher level of entrepreneurial self-efficacy.*

## 3. Methodology

*The sample.* The study tests hypotheses related to Lazear's theory on a sample of 1600 individuals in Poland. The first sub-group consists of 800 individuals who are self-employed for at least 36 months and combine it with salary work, i.e., they are hybrid entrepreneurs. The second sub-sample is a group of 800 successful "pure" entrepreneurs who managed to sustain their businesses for at least 36 months and who are not employed as a paid employee. Individuals who were performing professional activities under direct supervision for one employer, irrespective of the legal form of the contract, were not included into the sample.

*Data collection procedures.* The data for the study were collected by an established Polish market and opinion research institute. In the screening calls, those contacted were asked if they were currently a self-employed individual or an individual matching self-employment with salary work. The respondents who fell into either of these categories were then interviewed by telephone (with the CATI method). The questionnaire for hybrid and "pure" entrepreneurs was designed by a research team (see the Appendix 1 for some details about the questionnaire). Apart from basic demographic data, all the respondents were asked about their educational and professional track record, including formal education (secondary vocational education, studies and training sessions), the number of jobs and positions within their professional career, and international experiences and their entrepreneurship record. Additionally, the hybrid entrepreneurs were asked whether they started the entrepreneurship or the salary job first and which of these two career paths brings more personal satisfaction, results in higher income and takes more time. The average interview lasted about 25 minutes. The calls were held from the beginning of December 2017 till the end of January 2018. To avoid errors in the collection of data, pre-testing for a questionnaire was organised and some of the data points were checked randomly. An effort has also been taken to precisely define the groups by imposing filtering criteria and ensuring a solid sample design.

*The dependent variable.* In the study, the occupational status of being self-employed was used as a proxy for entrepreneurship, the theoretical concept applied by Lazear (2005) and his followers, who treat self-employment as entrepreneurship (Hsieh et al., 2017). The dependent

variable is a binary variable that is equal to 1 if the respondent is a hybrid entrepreneur and 0 if the person is a full-time, "pure" entrepreneur.

*The independent variables.* The choice of independent variables was largely dictated by the "jack-of-all-trades" hypothesis and described the interviewees' educational background and professional experience, which are at the heart of Lazear's theory. The former was measured with the number of fields of study undertaken (but not necessarily completed) to express the breadth of their educational track. This variable takes values from 0 (for someone who has never studied) to 6 in the subsample of hybrid entrepreneurs, and a maximum of 4 in the case of "pure" entrepreneurs. A variable expressing the highest earned level of formal education was incorporated into the model, which varies from 0 (meaning primary or no education) to 4 (tertiary education).

To capture the effects of the breadth of professional experience, the list of respondents' declared professions was classified into eight groups following the International Standard Classification of Occupations (ISCO, 2007):

1. Managerial occupations,
2. Health professionals/technicians and associate professionals,
3. Teaching/cultural professionals/technicians and associate professionals,
4. Science and engineering professionals and information and communications technology professionals/technicians and associate professionals,
5. Business and administration professionals/technicians and associate professionals,
6. Craft and related trades workers/Service workers,
7. Sales and purchasing agents, brokers and sales workers,
8. Elementary occupations.

The breadth of professional experience is operationalized based on the list of occupations the respondents had during their professional career and counts the number of different occupational groups under which the person's experiences are classified. Further, a measure of managerial experience was included, namely the number of firms in which the interviewee had worked in managerial positions. The span of life experience was expressed as the number of life activity areas, such as sports, hobbies, social activities, charities, volunteering, political activity, traveling as well as participation in cultural and religious life. The level of entrepreneurial self-efficacy was measured with the participants' self-assessment regarding skills in diverse areas of business, including financial management/accounting, sales, marketing and advertising, human resource management, customer relations, logistics and shopping, product design, and IT systems. This division was based on McGee, Peterson, Mueller, and Sequeira (2009) scale. Each of the above categories/dimensions was assessed on a 5-point Likert scale (1 = very poor to 5 = excellent/very good). Moreover, a set of controls, including the respondent's age, the number of children and sex (1 = male) was included.

To operationalize the set of experiences, diverse aspects of education and skills are assessed. Besides factors that reflect an actual set of skills, perceived skills using entrepreneurship-based self-efficacy are included.

Operationalisation of the variables has been guided by literature review. All the variables were built according to the definitions presented in Table 1.

Table 1. List of variables and operationalization

| Variable | Operationalization | Number in the questionnaire |
|---|---|---|
| Dependent variable | Dummy variable,<br>1 – hybrid entrepreneur<br>0 – full-time, "pure" entrepreneur. | Based on the filtering criteria for groups |
| Age | Expressed in years and calculated with the use of year of birth. | 2 |
| Sex | Dummy variable,<br>1 – Male,<br>0 – Female. | 1 |
| Number of children | Declared number of children. | 4 |
| Number of different fields of study | Sum of the number of different fields of study undertaken (but not necessarily completed). | 12 |
| Professional experience (occupations)- | Number of different occupational groups under which the respondents' declared professions are classified:<br>1. Managerial occupations,<br>2. Health professionals/technicians and associate professionals,<br>3. Teaching/cultural professionals/technicians and associate professionals,<br>4. Science and engineering professionals and information and communications technology professionals/ technicians and associate professionals,<br>5. Business and administration professionals/technicians and associate professionals,<br>6. Craft and related trades workers/service workers,<br>7. Sales and purchasing agents, brokers and sales workers,<br>8. Elementary occupations. | 8 |
| Self-efficacy (fields) | The level of entrepreneurial self-efficacy (fields) measured as the participants' self-assessment regarding skills in the areas of business, including financial management/ accounting, sales, marketing and advertising, human resource management, customer relations, logistics and shopping, product design, and IT systems on a 5-point Likert scale (1 = very poor to 5 = excellent/very good). The variable is calculated as the sum of self-assessment for all fields. | 17 |
| Number of non-professional activities | Sum of declared life activity areas such as sports, hobbies, social activities, charities, volunteering, political activity, traveling and participation in cultural/religious life. | 20 |
| Number of entities in which the respondent held *managerial position* | Declared number of entities. | 5b |

*End of Table 1*

| Variable | Operationalization | Number in the questionnaire |
|---|---|---|
| Highest earned level of education | The highest completed level of education:<br>0 – primary education or no education<br>1 – basic vocational education<br>2 – secondary vocational /secondary general education<br>3 – post-secondary education<br>4 – tertiary education. | 11 |
| Experience in managerial position | Dummy variable,<br>1 – if respondent held *managerial position*<br>0 – otherwise. | 5b |
| Self-efficacy (tasks) | The level of entrepreneurial self-efficacy (tasks) measured as the participants' self-assessment regarding confidence in dealing with different tasks such as: setting goals and planning their implementation, identification of new market opportunities, coming up with new products/ services/technologies, acquiring new clients, financial management, cooperation with other people, people management, leadership, work under uncertainty or stress, crisis management on a 5-point Likert scale (1 = no confidence 5 = very high confidence).<br>The variable is calculated as the sum of self-assessment for all tasks. | 18 |
| Number of different educational levels | Sum of the different levels of education completed, e.g. 0 = primary education/no education, 4 = basic vocational education + secondary general education + post-secondary education + tertiary education. | 11 |
| Professional experience (industries) | Number of different industries in which the respondents declared professional experience. | 7 |

*Methods and tools***.** The hypotheses were tested using multivariate logistic regression. As age, may exert a non-linear effect on the probability of becoming an entrepreneur, quadratic terms in this case were added. The logit estimates are reported in Table 3.

*Robustness of results.* To check the robustness of the results, alternative measures for the broadness of education, managerial experience, entrepreneurial self-efficacy and professional experience were used. The sum of educational levels instead of the number of courses of studies was utilised, and a dummy variable indicating whether an individual has managerial experience (1 = yes) in place of a variable expressing managerial experience in a number of firms was used. The third incorporated measure related to self-efficacy was based on an individual's confidence in the ability to engage in 10 entrepreneurial-related tasks, evaluated on a 5-point Likert-like scale (1 = no confidence, 5 = very high confidence). The sum of different industries in which the individual has professional experience was used instead of a number of different occupational groups under which the respondent's professions are classified[1].

[1] The variable is later on referred to as self-efficacy (tasks).

## 4. Results and discussion

In this section, first the report on the socio-demographic characteristics of hybrid entrepreneurs is presented, and their peculiarity highlighted by contrasting them against "pure" entrepreneurs in terms of level of education, professional and managerial experience, and entrepreneurial self-efficacy. Then, Lazear's theory of entrepreneurship is verified for this group of entrepreneurs.

*The portrayal of hybrid entrepreneurs*

The means, standard deviations, minima and maxima of the variables for hybrid entrepreneurs and "pure" entrepreneurs are presented in Table 2.

Table 2. The descriptive statistics

| Variable | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| **A: Hybrid entrepreneurs (N = 800)** | | | | |
| Age | 43.55 | 11.84 | 20 | 83 |
| Sex (dummy, 1 = Male) | 0.36 | 0.48 | 0 | 1 |
| Number of children | 1.25 | 1.08 | 0 | 5 |
| Number of different fields of study | 0.48 | 0.84 | 0 | 6 |
| Number of different educational levels | 1.45 | 0.63 | 0 | 4 |
| Professional experience (occupations) | 1.65 | 0.75 | 1 | 5 |
| Self-efficacy (fields) | 25.85 | 4.16 | 12 | 40 |
| Self-efficacy (tasks) | 36.36 | 4.78 | 12 | 50 |
| Number of non-professional activities | 3.93 | 1.47 | 0 | 9 |
| Number of entities in which the respondent held *managerial position* | 1.24 | 1.21 | 0 | 9 |
| Experience in managerial position (dummy, 1 = Yes) | 0.74 | 0.44 | 0 | 1 |
| Highest earned level of education | 2.66 | 0.95 | 0 | 4 |
| Professional experience (industries) | 2.09 | 1.21 | 1 | 7 |
| **B: "Pure" entrepreneurs (N = 800)** | | | | |
| Age | 45.70 | 11.11 | 18 | 68 |
| Sex (dummy, 1 = Male) | 0.67 | 0.47 | 0 | 1 |
| Number of children | 1.52 | 1.09 | 0 | 6 |
| Number of different fields of study | 0.83 | 0.93 | 0 | 4 |
| Number of different educational levels | 1.70 | 0.76 | 0 | 4 |
| Professional experience (occupations) | 1.15 | 1.20 | 0 | 5 |
| Self-efficacy (fields) | 28.08 | 4.54 | 12 | 40 |
| Self-efficacy (tasks) | 37.95 | 5.91 | 10 | 50 |
| Number of non-professional activities | 3.87 | 1.74 | 0 | 9 |

*End of Table 2*

| Variable | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| Number of entities in which the respondent held *managerial position* | 0.80 | 1.27 | 0 | 8 |
| Experience in managerial position (dummy, 1 = Yes) | 0.40 | 0.49 | 0 | 1 |
| Highest earned level of education | 3.04 | 1.16 | 0 | 4 |
| Professional experience (industries) | 1.33 | 1.37 | 0 | 9 |

Although the results of formal tests are presented in the next section, the comparison of descriptive statistics gives some interesting insights concerning both groups. Women turn out to be hybrid entrepreneurs much more often than men. Hybrid entrepreneurs are generally less educated (both in terms of level and breadth of education) than their "pure" counterparts. They also tend to assess their own competences at a lower level, both in terms of diverse areas and managerial tasks. However, hybrid entrepreneurs turn out to have broader professional experience, which also includes more experience at managerial positions. Finally, there is almost no difference in the mean age between the two groups, which suggests that there is no clear life-cycle pattern in becoming a hybrid entrepreneur. This lack of difference may, however, cover some underlying heterogeneity and is subject to formal testing in the following part of the analysis.

*Are hybrid entrepreneurs "jacks-of-all-trades"?*

The baseline model (column 1 of Table 3) had a Pseudo $R^2$ of 23.3%, and the F-test is significant at the 1 per cent level. According to the results of the estimation, the hypotheses 1, 4 and 5 have not been confirmed, whereas hypotheses 2 and 3 found their confirmation in empirics.

In light of the results, if there is a higher level of formal education ($p < 0.05$) and a higher variety of education measured by number of fields studied ($p < 0.01$), the probability of being a hybrid entrepreneur diminishes. Hybrid entrepreneurs, although they are potentially good candidates for "jacks-of-all-trades", seem not to follow Lazear's logic in terms of the level and diversity of education. The explanation of not following hypothesis 1 could be the time constraints of hybrid entrepreneurs. They share their time between employment and their own company, and therefore choose more flexible, informal learning. Because of these time constraints, they also tend to look for solutions for very specific and diverse issues and do not seek general knowledge. However, this finding is in opposition to some studies conducted earlier, where hybrid entrepreneurs were shown to be better educated than "pure entrepreneurs" (Folta et al., 2010). Therefore, more careful analysis of this issue creates an interesting research avenue for the future.

In contrast, the probability of being a hybrid entrepreneur increases with broader professional and management experience (both significant at $p < 0.01$) as stated in hypotheses 2 and 3. These results are easy to explain, as the more experiences individuals gained, the more business opportunities they confront, and in consequence potentially exploit. In this sense, in terms of professional and management experience, hybrid entrepreneurs share similarities with Lazear's "jacks-of-all-trades". At the same time, the breadth of life experience exerts no

Table 3. Results of logit regression for being hybrid entrepreneur (N = 1600)

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| Age | −0.1350*** | −0.1335*** | −0.1321*** | −0.1288*** | −0.1386*** | −0.1365*** | −0.1348*** | −0.1314*** | −0.1438*** |
| | (0.040) | (0.041) | (0.039) | (0.040) | (0.039) | (0.040) | (0.039) | (0.040) | (0.040) |
| $Age^2$ | 0.0012*** | 0.0012*** | 0.0012*** | 0.0012*** | 0.0013*** | 0.0013*** | 0.0013*** | 0.0012*** | 0.0014*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Sex (dummy, 1 = Male) | −1.2001*** | −1.1034*** | −1.2486*** | −1.1487*** | −1.2062*** | −1.1116*** | −1.2565*** | −1.1598*** | −1.1762*** |
| | (0.120) | (0.123) | (0.118) | (0.122) | (0.119) | (0.122) | (0.118) | (0.121) | (0.120) |
| Number of children | −0.1982*** | −0.2086*** | −0.2079*** | −0.2197*** | −0.1814*** | −0.1933*** | −0.1908*** | −0.2025*** | −0.1799*** |
| | (0.056) | (0.057) | (0.056) | (0.057) | (0.055) | (0.057) | (0.055) | (0.057) | (0.056) |
| Number of different fields of study | −0.5784*** | −0.5850*** | −0.5901*** | −0.5926*** | | | | | −0.5058*** |
| | (0.112) | (0.114) | (0.112) | (0.114) | | | | | (0.110) |
| Professional experience (occupations) | 0.6905*** | 0.5550*** | 0.6905*** | 0.5546*** | 0.6808*** | 0.5436*** | 0.6813*** | 0.5440*** | |
| | (0.066) | (0.068) | (0.066) | (0.067) | (0.066) | (0.068) | (0.065) | (0.067) | |
| Self-efficacy (fields) | −0.1124*** | −0.1138*** | | | −0.1121*** | −0.1129*** | | | −0.1152*** |
| | (0.014) | (0.014) | | | (0.014) | (0.014) | | | (0.014) |
| Number of non-professional activities | 0.0496 | 0.0256 | 0.0657* | 0.0409 | 0.0368 | 0.0125 | 0.0553 | 0.0298 | 0.0456 |
| | (0.037) | (0.038) | (0.037) | (0.038) | (0.037) | (0.038) | (0.037) | (0.038) | (0.037) |
| Number of entities in which the respondent held managerial position | 0.3092*** | | 0.3272*** | | 0.2851*** | | 0.3051*** | | 0.3305*** |
| | (0.051) | | (0.051) | | (0.051) | | (0.051) | | (0.051) |
| Highest earned level of education | −0.2104** | −0.2109** | −0.2132** | −0.2164** | −0.3042*** | −0.2904*** | −0.2912*** | −0.2771*** | −0.1587* |
| | (0.088) | (0.089) | (0.087) | (0.089) | (0.102) | (0.104) | (0.101) | (0.103) | (0.086) |

*End of Table 3*

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| Experience in managerial position | | 1.4197*** | | 1.4465*** | | 1.3858*** | | 1.4178*** | |
| (dummy, 1 = Yes) | | (0.135) | | (0.134) | | (0.134) | | (0.133) | |
| Self-efficacy (tasks) | | | −0.0664*** | −0.0672*** | | | −0.0673*** | −0.0681*** | |
| | | | (0.011) | (0.011) | | | (0.011) | (0.012) | |
| Number of different educational levels | | | | | −0.4754*** | −0.5145*** | −0.5178*** | −0.5593*** | |
| | | | | | (0.159) | (0.163) | (0.157) | (0.160) | |
| Professional experience (industries) | | | | | | | | | 0.5262*** |
| | | | | | | | | | (0.051) |
| Constant | 6.8062*** | 6.5912*** | 6.1442*** | 5.8910*** | 7.5537*** | 7.3247*** | 6.9140*** | 6.6708*** | 6.8928*** |
| | (1.003) | (1.029) | (1.008) | (1.029) | (0.986) | (1.010) | (0.991) | (1.011) | (0.997) |
| Pseudo $R^2$ | 0.233 | 0.268 | 0.218 | 0.254 | 0.224 | 0.260 | 0.209 | 0.246 | 0.234 |
| Prob > $chi^2$ | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |

*Note*: standard errors in parentheses.
Asterisks indicate significance at levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

statistically significant impact. Therefore, playing different roles in life (such as sports, hobbies, social activities, charities, volunteering, political activity, traveling and participation in cultural/ religious life) does not influence the probability of being a hybrid entrepreneur as professional and management experience, as stated in hypothesis 4.

The probability of being a hybrid entrepreneur diminishes with higher entrepreneurial self-efficacy ($p < 0.01$). This could be interpreted as hybrid entrepreneurs are not evaluating their entrepreneurial skills highly; hence they try to avoid possible failures by holding their salary job positions. It means that they are not perceiving themselves as capable of following only entrepreneurial career path and rather try to hedge against difficulties.

When it comes to age, the results revealed a U-shaped relationship (Figure 1). The probability of being a hybrid entrepreneur initially declines for younger individuals and then rises after a minimum at around the age of 54. When it comes to control variables, the probability of being a hybrid entrepreneur is higher for women and decreases with the number of children ($p < 0.01$). This could be explained by the fact that women need and use hybrid entrepreneurship also as a vehicle to decrease uncertainty before fully committing to their businesses (Belasen, 2017). They are in general less prone to risk and hybrid entrepreneurship enables them to test their extra business activity before a full immersion into entrepreneurship. However, having children limits the time that they could devote to develop their businesses "after hours".

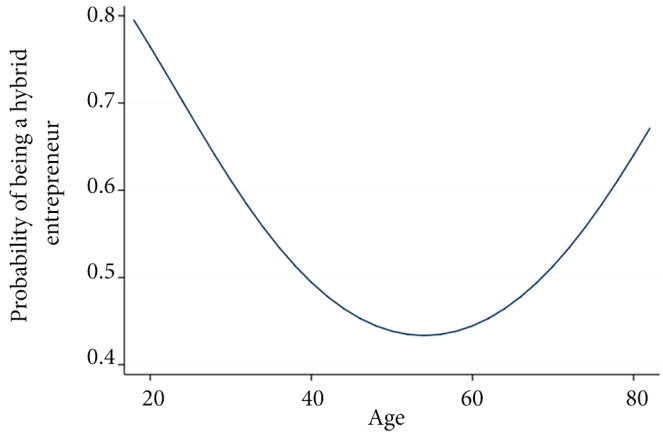


Figure 1. The probability of being a hybrid entrepreneur as age changes

To sum up, in light of the results, Lazear's theory cannot be extended and applied to the case of hybrid entrepreneurs. Hybrid entrepreneurs constitute a very specific group requiring separate theories or frameworks that explain their career choices. Nevertheless, the study confirms the importance of diverse professional and management experiences in being an entrepreneur.

## Conclusions

The idea of the study was to elucidate the concept of hybrid entrepreneurship by exploring the influence of skills, knowledge, and experience on the likelihood of being a hybrid entrepreneur rather than a full-time entrepreneur. The discussion was grounded in Lazear's theory of entrepreneurship. Hybrid entrepreneurs were assumed to fall into the "jacks-of-all-trades" category and therefore five hypotheses mostly related to particular elements of Lazear's theory were tested. However, according to the findings, and unlike "pure" entrepreneurs, hybrid entrepreneurs are not typical examples of "jacks-of-all-trades". Although the probability of being a hybrid entrepreneur increases with broader professional and management experience, at the same time it diminishes as the level and diversity of education increases. Therefore, Lazear's "jack-of-all-trades" hypothesis does not hold true for the group of hybrid entrepreneurs. This result is also supported when Lazear's theory is extended by adding the self-efficacy concept into entrepreneurial choice model. They observed a higher probability of becoming self-employed when entrepreneurial self-efficacy is higher and more balanced. In the study the probability of being a hybrid entrepreneur diminishes with higher entrepreneurial self-efficacy.

Verifying proposed hypotheses leads to a more nuanced understanding of hybrid entrepreneurship. As a theoretical contribution the study offers new insights regarding who hybrid entrepreneurs are and how unique they are. Hybrid entrepreneurs rely on previous diverse professional and managerial experience. However, they are characterized by less formal education, both in terms of the overall level, as well as a less diverse educational path. These results suggest that hybrid entrepreneurship tends to be more of a "jack-of-all-trades" in terms of practical experience, rather than formal education. Hence, Lazear's theory cannot be uniformly applied to this group in its pure form, but instead should be modified. The study suggests that individual characteristics may play an important role in entrepreneurial processes and entrepreneurship entry mode.

As far as practical implications are concerned, they are divided into ones related to education, public policy and (hybrid) entrepreneurs. First of all, the findings may also be used to advise pedagogy. Part-time entrepreneurs are more likely than other individuals to become full-time entrepreneurs. Therefore, assuming there is a demand to promote "full" entrepreneurship, the practical implications from the study regard the need to develop more diversified forms and contents of education, at the same time focusing on gaining meaningful experiences. The implications may also refer to public policy. In most countries, public policy supports full-time entrepreneurship, but does not relate to hybrid entrepreneurship when designing entrepreneurship related regulations. Assuming that at least some entrepreneurs are in the transition from being hybrid entrepreneurs to "pure" entrepreneurs, the findings indicate that this transition requires additional attention and aid as these two groups are importantly different. Therefore, creating a separate set of supporting tools for hybrid entrepreneurs is recommended as the dichotomy between entrepreneurship and salary employment is often broken. Also, venture capital funds and other lending institutions might be interested in arranging special funding schemes available for hybrid entrepreneurs. Besides, this study brings some implications for hybrid entrepreneurs who think about full immer-

sion into self-employment. To increase the probability of being a "pure" entrepreneur, hybrid entrepreneurs may "work" in the area of greater diversity and a higher level of education as well as higher entrepreneurial self-efficacy.

The study has several notable limitations. The first limitation concerns the sample used. The hypotheses were tested on "pure" and hybrid entrepreneurs from a single-country setting – Poland. The study refers to one particular context and therefore generalizing the findings to other populations has to be very careful and needs further validation. There might be some specific features of the Polish business environment that might have influenced the respondents. Therefore, future studies may broaden the approach to other countries or settings. The second limitation refers to the sample composition. A broader picture of entrepreneurship could be achieved if a third group of salary employees was added to juxtapose hybrid entrepreneurs with more than just "pure" entrepreneurs. It would be interesting to know how hybrid entrepreneurs who still keep their salary job are different from employed workers. Potentially, there are also some shortages in questionnaire which could relate to other interesting and specific issues for hybrid entrepreneurs, like for example whether being employee is an obstacle to succeed in entrepreneurship or what are the differences in responsibility distribution in case of hybrid and "pure" entrepreneurs. Adding few questions more to the questionnaire distributed among hybrid entrepreneurs' respondents could deepen an understanding of that group.

Despite these limitations, the results and discussion presented in this paper may be starting points for future conceptual and empirical studies on hybrid entrepreneurship by developing further the meaning of diverse entrepreneurial knowledge and experience in entrepreneurial activities, or by extending Lazear's theory in a way that considers the specifics of hybrid entrepreneurship. The results of the study indicated that there are still many underinvestigated topics related to hybrid entrepreneurship which are worth further consideration. Hopefully, this paper opens a window of opportunity for more research on this interesting group of entrepreneurs.

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## Author contributions

Agnieszka Kurczewska and Michał Mackiewicz conceived the study and were responsible for the design and development of the data analysis. Wirginia Doryń and Dorota Wawrzyniak were responsible for data analysis. All authors were responsible for data interpretation.

## Disclosure statement

Authors do not they have any competing financial, professional, or personal interests from other parties.

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## APPENDIX 1

### Extract from the Questionnaire

**Question 1:**

Gender:
Male
Female

**Question 2:**

Please enter the year of birth: ….

**Question 3:**

Please indicate how many children you have: ...

**Question 5:**

a. In how many companies/institutions have you worked so far? ….

b. In how many companies in managerial positions? ….

**Question 7:**

In which industries do you have professional experience? (Interviewer: you can mark several answers)

1. Industry / production
2. construction
3. trade
4. agriculture
5. transportation
6. other branches of production
7. hospitality and catering
8. science and technology development
9. education and upbringing
10. culture and art
11. health protection and social welfare
12. physical culture, tourism and leisure
13. other branches of services
14. state administration and justice
15. finance and insurance
16. other - what? (max 3)

**Question 8:**

At what positions have you been working in your professional career? (Interviewer: open question, list up to 15 positions, order does not matter)

**Question 11:**

What is the level of education you have acquired?

0 – primary education or no education

1 – basic vocational education

2 – secondary vocational /secondary general education

3 – post-secondary education

4 – tertiary education

**Question 12:**

What fields did you study? You can indicate a few answers, studying does not necessarily mean graduation (max 8) …

**Question 17:**

How do you assess your own skills in the following areas? (scale 1–5, where 1 means very poor, and 5 – very good)

1. Financial management and accounting 1 2 3 4 5
2. Sales 1 2 3 4 5
3. Marketing and advertising 1 2 3 4 5
4. Human resource management 1 2 3 4 5
5. Customer relations 1 2 3 4 5
6. Logistics and shopping 1 2 3 4 5
7. Product design 1 2 3 4 5
8. IT systems (including internet and graphic programs) 1 2 3 4 5

**Question 18:**

Please indicate on a scale from 1 to 5, to what extent do you believe in your skills in the following areas (where 1 means no faith and 5 is very bad faith in skills):

1. setting goals and planning their implementation 1 2 3 4 5
2. identifying new market opportunities 1 2 3 4 5
3. inventing new products / services / technologies 1 2 3 4 5
4. acquiring new clients 1 2 3 4 5
5. financial management 1 2 3 4 5
6. cooperation with other people 1 2 3 4 5
7. people management 1 2 3 4 5
8. leadership 1 2 3 4 5
9. work in conditions of uncertainty or stress 1 2 3 4 5
10. crisis management in the company 1 2 3 4 5

**Question 20:**

Respond to the following areas of activity: (YES / NO)

1. I practice sport regularly
2. I have a hobby / interests that I cherish
3. I am involved in some social activities
4. I help in charity
5. I am a volunteer
6. I am active in politics
7. I travel a lot
8. I actively participate in cultural life (cinema, theater, museums, etc.)
9. I actively participate in religious life