Entrepreneurship, Organization Capital, and the Evolution of the Firm

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Abstract We view the entrepreneur as an agent who possesses human capital in the form of specific skills or talents. When she starts a firm, her human capital is essential to the firm and it has substantial private value. The entrepreneur transforms her human capital over time into what we call “organization capital.” This organization capital can be sold as part of the firm, and so the dynamic process of transforming specific human capital into organization capital means that the value of the firm increases over time.

1 Introduction

The study of how and why firms get started has a rich tradition in the economics literature. Knight (1971) views an entrepreneur as someone who accepts production risk in exchange for the authority to direct other factors of production; this view is essentially static and helps identify entrepreneurial activity with the risk characteristics of the population. Kihlstrom and Laffont (1979) view an entrepreneur as someone who bears risk and receives the reward for the risk. Schumpeter (1949) thinks of the entrepreneur as someone who transforms inventions and discoveries into commercially viable processes. Baumol (1986, 1990 and Holmes and Schmitz (1990) focus on the entrepreneur’s role in adapting new technology to create new products.

Our theory of the entrepreneur differs from previous theories in one important aspect: we view the entrepreneur as an organizer of production who transforms a specific, nontradable capital into a general, tradable capital. The entrepreneur is an agent who possesses human capital in the form of specific skills or talents. When she

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1 We dedicate this chapter to the memory of Koji Shimomura.

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starts a firm, her human capital is essential to the firm. If there were no information
or incentive problems, then she could write a contract that would result in her sup-
plying her human capital fully and the firm’s value would be close to her private
value. However, since human capital cannot be sold or, in many instances, effi-
ciently contracted over, the actual value is substantially lower than her private value.
The entrepreneur solves this problem by transforming her human capital into what
we call “organization capital.” The organization capital can be sold as part of the
firm, so that the dynamic process of transforming human capital into organization
capital means that the value of the firm increases over time. By this process, the
entrepreneur uses her specific human capital to accumulate general, tradable assets.

The process of using human capital to create organization capital is the focus
of our analysis. We define organization capital to be information, specific to the
firm, which allows the firm to transform technological know-how and factors of
production into products and services it can sell in the market. The organization
capital is thus embodied in the firm and has value.

The dynamic optimization problem faced by the entrepreneur is as follows. The
entrepreneur’s time weighted by her human capital is used directly in the production
process to produce output and is also used to produce organization capital. Organi-
zation capital is an imperfect substitute for human capital in the production process.
The entrepreneur must, therefore, decide how much time to devote to current pro-
duction, how much to devote to build organization capital, which earns a return
in the future, and how much leisure to consume. Given the leisure-work decision,
the entrepreneur trades off creating more organization capital now, which means
that the firm has substantial value sooner, against using that human capital for cur-
rent production, which generates income in the current period. The solution to this
dynamic optimization problem pins down the evolution of organization capital over
time and the rate at which the value of the firm grows. As the firm evolves over time,
the entrepreneur transforms her human capital, a specific, nontradable asset, into a
general asset that is tradable in the market.

We develop and solve a very simple model of the evolution of the firm, which
yields a number of results. First, we show that the entrepreneur devotes a lot of
time in the initial stages to create organization capital but decreases her time as
the firm evolves. We show that the stock of organization capital increases at a
decreasing rate. Finally, we show that the value of the firm (the value without the
entrepreneur) increases over time, gets closer to entrepreneur’s value, but is always
below the entrepreneur’s value (which includes the entrepreneur’s efforts to increase
organization capital).

Our idea of organization capital as accumulated knowledge embodied in the firm
is similar to the type of capital considered by Marshall (1930). In related work,
Rosen (1972) and, more recently, Atkeson and Kehoe (2005) develop models in
which the firm produces organization capital and output as a bundle. In contrast,
in our model there is a trade-off – the entrepreneur has to divide her time between
production of output and creation of organization capital. In Prescott and Visscher

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2 See Wu (1989) for a background on why no one may be willing to hire entrepreneurs.