

INTANGIBLE ECONOMY

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Abstract: The process of committing time, resources and money in order to produce useful things in the future is, from an economic point of view a defining part of what business, governments and individuals do. Over the last few decades, the nature of investment has been changing to large extent.

The type of investment that has risen dramatically is intangible: investment in ideas, in knowledge, in aesthetic content, in software, in brands, in networks and relationship.

The paper describes this change and why has happened.

Any investments, tangible or intangible, is a step into the unknown. No businesses know for sure what the return will be. First of all, owing to its invisibility, intangible investments tend to be worth less if they fail. It's harder to recover their value by simply selling them.

The upside of an intangible investment is potentially much higher, since it is more likely to benefit from scale (so a modest investment can reap a big return) or synergies (increasing its value directly). So when things go wrong, intangibles tend to be worth less, and when they go well, they tend to be worth much more.

The tendency of intangible investments to generate spillovers makes radically harder to estimate the future returns to the company. And the absence of markets for many intangibles (which contributes to their sunkness) makes it harder to form a realistic estimate of their value.

Intangibles also tend to be contested. People and businesses will often vie to see who control them, own them, or benefit from them. This is partly a function of spillovers.

Intangibles have four unusual economic properties. These properties can exist with tangible investments, but on the whole intangible assets exhibit them to a greater degree.

The numerous reasons for the growth of intangible investment, including the changing balance of services and manufacturing in the economy, globalization, the increased liberalization of markets, development in IT and management technologies, and the changing input costs of services(which play a greater role in intangible investment).

This paper looks at the role of intangibles in secular stagnation, the puzzling fall in investment and productivity growth seen in major economy in recent years. We argue the increasing importance of intangible investment may have an important role to play in this troubling phenomenon.

Keywords: intangible investment, assets, capital

1. INTRODUCTION

Now, there is nothing inherently unusual or economically interesting about changing the kinds of things that businesses invest in. As a matter of fact, nothing can be normal: the capital fund of the economy is always changing. Our central argument in this paper is that there is something fundamentally different in intangible investments and that understanding the ongoing drive for material investment helps us understand some of the key issues we face today: innovation and growth, inequality, the role of management, financial crises and policy reforms.

There are two major differences with intangible assets. Firstly, most measurement conventions ignore them. There are good reasons for this, but as intangible they become very important, and we are now trying to measure capitalism without counting all the capital. Secondly, the basic economic properties of intangible assets make an economy which is rich in intangible assets behave differently from one that is rich in tangible assets.

Intangible investments, on the other hand, depend much more on labor. The design includes paying designers. R&D involves paying scientists. The software includes programmer fees. Thus, over time, we would expect intangible investment costs to gradually increase relative to tangible ones. Some intangible expenses are mostly "fixed" or one-time, so this may not be the whole story, but it will probably be at least one element of it. New technology seems to be increasing the opportunities for businesses to invest productively in intangible assets. The most obvious example is IT. Because many intangible assets include information and communication, they can almost certainly be more effective with better IT.

One plausible explanation for the increase in intangible investment is that the balance of what businesses produce has changed. Everyone knows that the production of developed countries, even those with large manufacturing sectors, consists mainly of services. Some sociologists and futurists who first foretold the rise of a "post-industrial

society" were also prophets of what became known as the knowledge economy. Is it true, then, that the modern world is replacing 'dark mills' with service businesses that invest in systems, information, and ideas?

It should come as no surprise that untouchable things, such as ideas, commercial relationships, and knowledge, are fundamentally different from physical things like machines and buildings.

Furthermore, we will consider each of the four characteristics of intangible assets- scalability, sunkness, spillovers and synergies - and we will discuss (a) why intangible assets behave in this way (especially compared to tangible investments) and (b) why each feature is important? What is different about intangible investments? And after discussing each of the four Ss in detail, we will look at how some of new properties of intangible assets, such as the uncertainty and the creation of optional values, arise from these Ss.

Why are intangible assets scalable? Physical assets can only be in one place at a time. In contrast, intangible assets can usually be used continuously, in multiple places at the same time. Once you have written the Starbucks user guide in Chinese - an investment in organizational development - you can use it in any of the 1,200 stores in the country. The cost of developing an application - and investments in software - can be shared over an arbitrary number of downloads. And an aircraft engine manufacturer only needs to design a certain type of jet engine - an investment in research, development and design - once, before an arbitrary number of engines can be made. This scalability applies to many types of intangible assets. Once a business has created or acquired an intangible asset, it can usually use it again and again at a relatively low cost, compared to most physical assets.

From an economic point of view, scalability stems from a key feature of ideas: what economists call "non-rivalry." If I drink a glass of water, you cannot drink from the same glass: it is a "rival" good. But if I use an idea, you can use the same idea: the idea is not rival. While rivalry might then be economically primitive behind scalability, we will use scalability for mnemonic convenience.

We can expect to see three unusual things in an economy where more investments are scalable. Firstly, there are intangible intensive businesses that have become very large. Starbucks has been able to use effective branding, operating processes and supply chains to expand worldwide. Google, Microsoft and Facebook need relatively little material resources compared to the manufacturing giants of the past. They can increase their package of intangible assets or software and reputation and thus become very large. This type of scalability, of course, is enhanced by network effects. Secondly, with the prospects of such large markets; more and more companies will be encouraged to try their luck in these markets. They are faced with a difficult choice because although the potential market may be large, encouraging them to go, the competition can be very tough, which will discourage them. The net result of this was described by the economist John Sutton: In markets where these investments are important (such as research and development or branding), what we expect to see is "industrial concentration" - a relatively small number of dominant large companies. Thirdly, businesses seeking to compete with owners of intangible assets are in a difficult position. On the one hand, the rewards are high. But in highly adjustable markets, rewards for the second-placed are often low. If Google's search algorithm is the best and is almost infinitely adjustable, why use Yahoo? All scenarios taken by the winner are likely to be the norm.

If the business makes an intangible investment and later decides that it wants to withdraw, it is often difficult to reverse the decision and try to recoup the investment costs by selling the asset created - and generally more difficult than in the case of a tangible asset. Economists describe these types of non-refundable costs as 'sunk'.

Why are intangible assets declining? Now, of course, some tangible assets are also hard to sell if a company or project fails. In particular, there are two characteristics of tangible assets that make them easier to sell and less likely to be investments that fail. The first ones are the phenomena of mass production and standardization. One of the wonders of mass production is that many tangible assets are copies of other tangible assets. Many tangible assets, from buildings to land, are useful for many types of business. A patent, a smart set of operating procedure, or a brand are more likely to be primarily useful to the company that developed them in the first place. Even where there are markets for intangible assets - such as patents - many assets are far more useful to their original owner than to anyone else.

Investments with high non-repayable costs can be difficult to finance, especially with debt. One of the reasons that banks prefer mortgage lending is that their loans are secured by a valuable, real estate asset that can, if the borrower does not pay, be confiscated and sold. Companies with a lot of intangible assets, on the other hand, are a total pain in the neck for banks if everything goes wrong. First of all, can such property be confiscated? Secondly, can it be sold? Sunkness also contributes to the uncertainty about intangible assets. Part of the reason for sunkness is that intangible assets are often very specific. It may be about a supply chain that is unique to a particular industry or supplier. Maybe it's the reputation for product quality. All this makes it harder and harder to assess the value of such an asset, because sunkness stops the creation of markets for such assets. The lack of markets means that the value is very difficult to be determined. The sunkness of intangible investments can also have an impact on the way businesses behave.

Moreover, the lack of markets for most intangible assets will make it difficult for managers to obtain data on the value of their assets. In the short term, this can lead to over-optimistic over-investment - and more frequent bubbles. As well as helping to inflate bubbles, the submerged nature of intangible investment can make it more painful when the bubbles finally burst. We are used to the idea that when the market fails, businesses often have to sell their assets very cheaply, because almost everyone else also wants to sell too. But when a bubble based on sunken, intangible assets specific to the company bursts, there is a risk that the assets will be worth more or less nothing. Given this, you may be wondering why companies make such an investment decision at all.

Firstly, some of the returns can be very high, high enough to reward all these risks. Secondly, although the cost may be more difficult to recoup than in the market for second-hand tangible investments, there are other non-market benefits. An investment in knowledge, even if it fails to be sold directly, can be very valuable if it creates information that resolves uncertainty about the company. Many companies carry out simultaneous research projects: project A failure may not directly create a market asset (let us say patent), but it may very well contribute to Project B success by discovering what should not be done. Thus, an intangible investment can be worthwhile by providing the company with valuable information about the opportunities it faces, which is called 'option value'. We treat this value as an emergency property resulting from the irreversibility / sunkness of the asset.

Some intangible investments have unusually high returns: that is, it is relatively easy for other businesses to take advantage of intangible investments that they do not make themselves. A classic example is R&D: copying other people's ideas is relatively easy, unless the law prohibits it through patents or copyrights. In the language of economists, the ideas created by research and development are not competitive - my use of knowledge does not prevent you from using it. According to Thomas Jefferson: "He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me". Spillovers are important for three reasons: Firstly, in a world where companies cannot be sure that they will reap the benefits of their investments, they would expect to invest less. Secondly, there is a premium for the ability to manage spillovers: companies that can maximally invest in intangible assets or that are particularly good at exploiting spillovers from other people's investments will be particularly well placed. Thirdly, spillovers affect the geography of modern economies. The classic answer to the spillover problem is state funding. And indeed, this happens a lot.

Moreover, the ability to attract overflows of intangible investments of other companies is perhaps as important as the ability to increase profits from their own. Being well-connected, aware of important developments in your field and having the ability to collaborate, seek services and coordinate partnerships is becoming more important in a business where investments have higher returns. After all, taking advantage of another company's investment spillovers is in some ways a free lunch.

All this means that in an intangible economy, the ability to solve the spillover problem becomes very important. This requires a range of skills: technical skills for understanding intangible assets, such as scientific or engineering knowledge; in some cases, legal expertise or talent for negotiations; in others, softer skills such as leadership and networking.

Why are the synergies of intangible assets important?

If the spillovers of intangible assets encourage companies to keep their investments to themselves, or at best to share personal interest, then the synergy of intangible assets has the opposite effect. If your ideas are worth more when combined with other ideas, there is a strong incentive to gain access to as many ideas as possible. One manifestation of this is the growing importance of open innovation. In its simplest form, open innovation occurs when a company intentionally connects and benefits from new ideas that arise outside the company.

But most of the problem with secular stagnation remains.

A look at secular stagnation can explain the following four facts:

1. Decrease in the measured investments simultaneously with the decline in interest rates
2. High profits
3. Increasingly unequal productivity and profits
4. Weak growth of the total productivity factor.

Last but not least, it has been speculated that lagging firms may be less able to absorb overflows from leading companies, perhaps because leading firms are much more able to exploit synergies between different intangible types than slower-growing ones. Or it is possible that the economy is at a stage where the transition to an intangible economy, which requires a new set of institutions to address natural self-sufficiency in intangible assets, distorts investment into lobbying, legal arguments, and institutional reboots, none of which is immediately productive.

2. CONCLUSION

There is a link between the increasing importance of intangible investment and the observed increase in many types of inequality in recent decades in many developed countries. It is argued that the growth of intangible assets can be expected to increase inequality in both wealth and income. More and more companies with intangible investments will need better staff to create synergies with their other intangible assets. Firms will explore their potential for collaboration in more detail and pay them better. In terms of wealth inequality, the spillover of intangible assets makes life in cities even more attractive, causing rising housing prices and wealth for those lucky enough to own. It is believed that the cultural characteristics needed to succeed in an intangible economy can help explain the socio-economic tensions that underlie the populist politics in many developed countries.

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