



Shock Therapy and Entrepreneurial Flare #Brexit

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Purpose – Much has been written about trade deal opportunities after Brexit (e.g. Minford et al, 2017; Singham & Tylecote, 2018) but much less about envisaged “supply side mechanisms” that would translate a Brexit shock into improved UK competitive performance. Indications as to the supply side mechanisms involved can be found in some pro Brexit writings and speeches and revolve around cutting regulation and reducing taxation, to spur innovation entrepreneurship. We contend that these measures align to a broad set of policy measures associated with Economic Shock Therapy, the Laffer Curve and the associated “Washington Consensus” (Williamson, 2005). We are looking to stimulate a conversation around whether these measures are most likely to stimulate entrepreneurial innovation and growth. We open by contrasting these concepts to growth equilibrium dynamics drawn from Wicksell, Keynes and Schumpeter - and by implication dynamic Walrasian General Equilibrium - to pose the question, is entrepreneur led growth best led via slashing regulations and taxes or by focusing on correcting existing market failures? This Viewpoint article is intended to promote controversy and debate as to which “supply side measures” are most effective in enabling entrepreneurial growth.

Design/methodology/approach – We briefly review the pro Brexiteer economic framework and relate this to broader Economic Shock Therapy and Laffer Curve concepts; how these have been applied and how some argue they can become “supply side” enablers in a positive Brexit innovation and entrepreneurship transformation. By drawing upon fundamental economic relationships such as Wicksell’s 1898 “Natural Rate of Interest,” we highlight the importance of information asymmetry and regulatory distortion in financial markets, resulting in some entrepreneurs (and associated innovations) failing to receive the capital their project merit. We pose the question, whether Shock Therapy, Laffer Curve type tax cuts and any Brexit “bonfire of regulation” will raise entrepreneurial growth and success.

Findings – Both Shock Therapy and Laffer Curve inspired tax cuts have a patchy record of success, despite notable achievements in post 1991 Poland. We stress entrepreneurs drive innovation and growth, and a key support to them requires correcting “access to finance” market failures. It is questionable if Economic Shocks contribute anything to resolving this fundamental problem.

Originality/value – We open the supply side debate on anticipated “Brexit Transformation” in the context of long standing (some maybe long forgotten) theoretical understandings, thereby posing the question as to whether potential Brexit related deregulation, tax cuts and “Economic Shock” therapy are likely to raise entrepreneurial competitive advantage and success rates. Market failure in financial market support for small firm growth and innovation needs are highlighted. Arguably, economic growth and innovation would be better sustained by addressing these failures, than introducing the “unknowns” and risks associated with a substantial economic shock.

Keywords Shock Therapy, Access to Finance, Brexit, Entrepreneurial orientation, Keynes, Schumpeter, Minsky, Wicksell, Financialisation, Laffer Curve, Monetary Economics, Natural Rate of Interest, Monetary Policy, Basel Regulation, Entrepreneurship, Growth, Small firms, Washington Consensus

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4 **Paper type** Viewpoint
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6 **Introduction**
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9 Many claim that Brexit benefits will lead to a reinvigorated UK economy, spurred on by
10 competing in newly opened global markets through signing new and innovative trade deals
11 (Minford *et al.*, 2017). Underpinning competitive performance in the new trade arrangements
12 will be a supply side policy driven by especially deregulation (Halligan¹ & Lyons, 2018) and tax
13 cuts (Singham *et al.*, 2017; Johnson, 2018a,b). This message is reinforced by arguments that
14 “protectionism [can no longer be] perceived as just a problem of border barriers. It now lurk[s] in
15 national regulations, performance requirements, buy-local provisions, investment benchmarks,
16 regulatory standards, intellectual property laws, and other domestic laws, regulations, and rules
17 (Ikenson *et al.*, 2018:6). In this argument, trade deals are therefore as much about deregulation
18 as they are about reducing tariffs. In this paradigm, trade deals, de regulation and tax cuts are
19 seen together as being synonymous with unleashing a new wave of entrepreneurial creativity. In
20 this Viewpoint piece and working from the assumption that the UK can sign trade deals that are
21 at least as good as the EU, we ask how robust are the supply side de regulation and tax cutting
22 legs as drivers of innovation, growth and entrepreneurship?
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30 Economic growth leading to rises in productivity, increased exports and improving living
31 standards is the Holy Grail of socio-economic policy (Jennings & Crane, 1994; Peters, 1998).
32 Nuances around this central theme such as, how should sustainability, inappropriate welfare,
33 balanced trade, sovereignty, immigration, reducing state debt or income distribution are often
34 presented as separate issues. The juxtaposition is that satisfactory resolution can often be a
35 positive consequence of balanced healthy growth, whilst a pervading focus on the above
36 “nuances” risks negatively impacting overall growth rates.
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41 All economies are laboratories for growth, both in terms of how it occurs and how it can be
42 engineered to be “balanced” and “healthy” (Maddison, 1991; Landes, 2003) and the diffusion of
43 a new techno-economic paradigm is necessarily a trial and error process involving great
44 institutional variety (Freeman, 1995:18). Politicians and economists from all sides have been
45 quick to claim they have solutions, instant or otherwise; yet, in many cases these solutions have
46 no substance or value at all. They are in fact, no more than “snake oil;” such solutions could also
47 be termed mirages of little lasting importance (Culkin & Simmons, 2018).
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52 The UK has over the last 50 years had many growth initiatives (Hall, 1993; Mazzucato, 2016).
53 These range from the “white heat of the technological revolution” with state supported R & D in
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¹ Liam Halligan is a member of Professor Minford’s “Economists for Free Trade”
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3 projects such as Concorde, to promoting mega – mergers through the Industrial Reorganisation
4 Corporation (and the British Leyland cataclysm), to “picking winners” (with successes such as
5 INMOS and disasters such as DeLorean), through to de-regulation and de-industrialisation. Most
6 recently we seem to have returned full circle into a new “white heat” of technological revolution
7 with modest state encouragement for innovations such Graphene, Artificial Intelligence and
8 Driverless Cars. A cynic can be forgiven for thinking we have advanced back to the beginning
9 again (Williams *et al.*, 2018).
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14 The UK June 2016 Brexit Referendum vote to leave the UK was for some an expression of hope
15 that leaving the UK will lead to an economic renaissance as red tape is demolished and
16 entrepreneurial spirits are unleashed. Brexiteer Boris Johnson writes “... *how a post-Brexit Britain*
17 *will be a happy and dynamic economy that fosters enterprise, that rewards the strivers and the*
18 *innovators, and where people can hope to take home more of their pay to their families.... the*
19 *United States currently boasts economic growth rates far in excess of this country, at about 4.5*
20 *per cent, and with record low unemployment – and that growth is being driven not just by the US*
21 *government’s decision to cut taxes and regulation, but perhaps even more by psychology: by the*
22 *sense that the government wants to cut taxes, wants to liberate and energise people.” (Johnson,*
23 *2018a). Some commentators (c.f. Conway, 2017) have argued that Brexit will provide an impetus*
24 *to innovation, shake away the business cobwebs and open the way to a new era British Industrial*
25 *Revolution and renewed UK global economic leadership (Minford, 2016). Such an approach aligns*
26 *with a strand of economic policy known as “Economic Shock Therapy”.*
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34 **Economic Shock Therapy**

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36 Milton Friedman (1962:xiv), the intellectual architect of “Economic Shock Therapy” writes:
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39 *“Only a crisis - actual or perceived - produces real change. When that crisis occurs, the*
40 *actions that are taken depend on the ideas that are lying around. That, I believe, is our*
41 *basic function: to develop alternatives to existing policies, to keep them alive and available*
42 *until the politically impossible becomes the politically inevitable.”*
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46 *Shock Therapy* has many similarities to the controversial 1980’s and 1990’s “Washington
47 Consensus” promoted by institutions such as the International Monetary Fund and World Bank
48 as “structural adjustment” programmes for countries facing balance of payments or
49 developmental crunch’s. Such policies emphasised privatisation, de-regulation, anti-corruption,
50 public deficit reduction and the removal of trade barriers and then the market will by itself work
51 a transformation (Williamson, 2005). In a review of the success and failure of this “new policy
52 mix” in South America, Sachs (1989) emphasises the importance of macro-economic structural
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3 adjustment being combined with meaningful Debt Relief. He most especially highlights the
4 success of Bolivia in tackling its hyperinflation through a combination of policy adjustments and
5 debt relief seeking to demonstrate that where debt relief is not sufficient (e.g. Argentina in the
6 1980's), adjustment will not be so satisfactory. Economic Shock Therapy extends this "macro-
7 economic adjustment" approach by explicitly freeing "Supply Side Conditions" and adopting a
8 sudden shock rather than gradualist approach, looking then to enable inbound direct investment
9 to drive private sector growth (Wojciechowski, 2013).
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14 Several contributions are arguably key to the intellectual base for Economic Shock Therapy. First,
15 Ronald McKinnon (1973) argued that Less Developed Countries could raise their growth rates
16 through opening to international capital flows and deregulating. Second, work on balance of
17 payments deficits in the late 1970's - following the oil price rise earlier in that decade - attributed
18 Less Developed Country deficits to structural issues in those countries, rather than the shock of
19 a rise in the oil price (Sachs *et al.*, 1981). Third, Mussa (1982) developed an adjustment model
20 that postulates adjustment is socially optimal when private maximising behaviour is uncapped,
21 and that adjustment costs start to accumulate as regulatory barriers and distortions impede the
22 adjustment process. Government's role is therefore to remove barriers to adjustment.
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28 *"A principal objective of government policy should be to create an environment in which*
29 *the decisions of these agents lead to a socially appropriate outcome by removing the*
30 *general distortions, including the distortions associated with government taxes and*
31 *transfers, that cause the privately perceived benefits or costs of adjustment to diverge*
32 *substantially from the true social benefits or costs" (Mussa, 1982:117).*
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37 Subsequently as adjustment policies have been executed, the speed of adjustment has become
38 controversial and spawned considerable literature. For example, Gavin (1993) argues that whilst
39 shock therapy may be theoretically optimal in "neo-classical" terms, the policy's unemployment
40 consequences may require a more "gradualist" approach. Aghion & Blanchard (1994) suggest an
41 important trade off relationship exists between unemployment and the speed of reform. Finally,
42 Dehejia (1996) draws to our attention that such "Shock Therapy" needs to be accompanied by
43 income redistribution between different societal groups and that this may lead to political
44 preference for a more gradualist approach.
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49 "Supply Side" measures such as tax simplification, skills enhancement, and procedural
50 improvements are implemented with the intention of helping entrepreneurs and can sometimes
51 be intended to replace sectoral development strategies aimed at joining up entrepreneurial
52 policy, MSME policy, sectoral development policy and demand, branding and export support
53 initiatives. The role of the state in the "Supply Side" model is to ensure "Free Markets" and "Free
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3 Trade” whilst minimising its own interference. Economic development and technological
4 improvements are anticipated to flow from Foreign Direct Investments (FDI) associated with rises
5 in sales, improving standards, technology transfer, capital investment and skills uplift. It is noted
6 that “Supply Side” policy adoption has been controversial in many countries subjected to it. Some
7 argue that the damage it does and that it may not be the best approach (Stiglitz, 2011) and those
8 advocating the policy stressing how much good it does (Babb, 2013).

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11 Complementing “Supply Side Washington Consensus” policies are low tax initiatives that claim
12 authenticity through the Laffer Curve. The Laffer Curve started its life on a napkin during a
13 September 1974 lunch between economist Arthur Laffer, Jude Wanniski, Dick Cheney and Donald
14 Rumsfeld (NMAH, 2013). It postulates that growth rises when taxes, especially personal taxes,
15 are cut. Intuitively, one would expect that a cut in top tax rates from say 99% to 50% would have
16 some impact, but results may be less certain if tax rates are (as in the UK) already internationally
17 low. Studies have found that the Laffer Curve is not substantiated; Goolsbee concludes, “*The*
18 *notion that governments could raise more money by cutting rates is, indeed, a glorious idea...
19 Unfortunately for all of us, the data from the historical record suggest that it is unlikely to be true*”
20 (2009:44). Arthur Laffer’s unfortunate newspaper comment that Iceland was an example for all
21 the world to follow shortly before its banking system and economy crashed in 2008 has not
22 helped this narrative (Laffer, 2007). Notwithstanding former Foreign Secretary Boris Johnson
23 (2018) rekindles the spirit of Laffer

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*“We should set our taxes at the optimum rate to stimulate investment and growth, and
we should be constantly aiming not to increase but to cut taxes. Mindful of the insight of
the great 14th century Tunisian sage Ibn Khaldoun – picked up by Arthur Laffer, admittedly,
that you can often cut taxes to increase yields.” (Johnson, 2018a).*

Brexit: A Crisis to Force Productive Change?

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Shock Therapy suggests that a crisis - a rupture with the past forces productive change. In a UK
Brexit context, the suggestion has been made that European Union membership has distorted
growth and innovation through burdensome regulation and restricted access to non-European
Union markets (Ormerod, 2017). In this nexus leaving the EU is the shock the UK needs to enable
the market to adjust presumed distorted UK business structures that have evolved as being part
of the European Union into structures that can more effectively compete and beat competitors
globally.

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*“In fact, Brexit, as described above, constitutes a major economic reform, similar to the
many market reforms introduced by UK governments since the early 1980s and recently.
Such a reform would benefit industries where we perform best and would remove subsidies*

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3 *from some others: jobs and investment (including foreign direct investment) will expand in*
4 *the first at the expense of the latter. Overall, as our pre- and post-Brexit forecasts show,*
5 *jobs and investment will expand as UK output rises, helped by the boost to spending power*
6 *from lower prices.” (Minford et al., 2017:6)*
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10 In this next section we ask, is economic shock therapy just what the UK needs to spur growth and
11 innovation, as it prepares to enter the Brexit Transition Phase when it officially leaves the
12 European Union on 29 March 2019?
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Economic Shock Therapy in Action

History can often shed helpful light and wisdom on specific policy alternatives. In the recent past a number of states left a protective community and then went through a series of market shocks to adapt them to the global economy and the results varied according to country. The fall of the USSR and Comecon in the period 1989 – 1991, plus the liberalisation procedures adopted under the “Washington Consensus” provide a real-life laboratory to see how Shock Therapy works in practice, when applied to economies that have been subject to restrictive regulation and protected markets. Could this be a reasonable simile through which to understand the assertions by Minford *et al.* (2017)? We take two examples from the breakdown of the Soviet Union, following the fall of the Berlin Wall in 1989 - Poland and Russia.

In 1989, Poland faced three strategic issues with the demise of the Soviet Block (albeit the dissolution of the Soviet Union did not take place until 26 December 1991). First, moving away from a socialist state economy with firms in state ownership and control; second resolving a financial crisis with hyperinflation, government deficits and a collapsing currency; and, third structural adjustment requiring a shift from capital intensive defence focused industries into market focused industries (Sachs, 1994). The Polish goal, Sachs emphasised, was to look West and integrate into Western Europe. Faced with these challenges, Poland undertook a rapid process of de-regulation (for example passing 11 key laws in three weeks) with a high level of success as prices stabilised and the private sector started to take over from the state one. The Balcerowicz Plan² of the 1990s emphasised that Polish renewal would come from stabilizing the economy, liberalising all aspects of internal and external trade (Zapalska, 1997), together with foreign debt forgiveness. Balcerowicz (2000) the architect (together with Sachs) of the Polish reform program emphasises that Polish renewal came from removing rigidities and barriers in markets together with foreign debt forgiveness. Balcerowicz (1994) claims the crown jewel of the adjustment process was the rapid removal of the hyper-inflation that existed prior to the program.

By contrast following the start of the Yeltsin administration, Russia entered into a controversial program of Shock Therapy, deregulation and the sale of state enterprises. This programme has been summarised by Roaf *et al.* (2014) who describe a post 1992 liberalisation that removed price and exchange controls that started to encounter local resistance as “*Vested interests successfully pushed for public financing to loss-making enterprises, and large-scale monetization of public sector deficits continued for several years.*”

² The Balcerowicz Plan was a method for rapidly transitioning from a communist economy, based on state ownership and central planning, to a capitalist market economy. Named for its author, the Polish Finance Minister and economist Leszek Balcerowicz, the plan was adopted in Poland in 1989.

Whereas in Russia the transition to a Capitalist Economy started from nothing, Poland already had a nascent private small firm sector (Chepurenko & Vilenski, 2016). In contrast to the Polish experience, Russia found its rapid initial small firm growth and penetration stagnating as *predatory entrepreneurship* took over and entrepreneurship became destructive in some cases (Kogut *et. al.*, 2002).

World Bank GDP growth rate data for both Russia and Poland is shown in **Table 1** below for the period 1990 to 1998 (when the Russian Financial Crisis hit). Steglitz (1999) argues that, a Russian GDP fall of nearly 50%, suggests a less than successful transformation. Unsurprisingly, one of the economists who played a disputed role in the Russian programme in a blog post (Sachs, 2012) distances himself from the Russian experience.

>>>>>>Take in Table 1<<<<<<<<<<<<<<<<

For completeness, some would argue that shock therapy works if it has the right institutional base, as a recession is an inevitable part of the economic adjustment mechanism as resources are first freed and then after time used elsewhere (Popov, (2000). The reallocation of resources in itself may not lead to entrepreneurial growth, for example in Russia a knock-on effect of the changes has been to slow innovation and disruptive start-ups in preference for skewing resources and development into previously existing basic industries (Sherstnev, 2014; Perraudin, 2017).

A Necessary and Sufficient Condition?

As children, we may have been taught the fallacy of the following statement “*a bus has four wheels, therefore everything with four wheels is a bus*”. The relative GDP performance from our brief review suggests that *Shock Therapy* in itself is not a “*necessary and sufficient*” condition for economic growth (Kierzenkowski *et al.*, 2016). Rather it is “*context*” because it worked in one context does not mean it will work in another.

Entrepreneurs are the “*magic ingredient*” that drive innovation and economic growth (Segal, Borgia & Schoenfeld, 2005; Dawson & Henley, 2012). Growth and innovation come from individuals and small teams who see some opportunity to offer a product or service to benefit their customers (Mallett, 2017; Mitchelmore & Rowley, 2010). Entrepreneurial motivations can be pure profit, or they can be more complex and include philanthropic, social and in some cases, can be “*paternalistic*”. Whatever their motivation, it is the entrepreneur that provides the alchemy that delivers transformational innovating growth.

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3 Companies just like trees in a forest start from little seeds; some grow, some die and some plod
4 along (Marshall, 1890; Anyadike-Danes *et al.*, 2015; Dillen *et al.*, 2018). Economic growth can be
5 seen as a cycle of continuous innovation with Entrepreneurs launching new products and ideas,
6 and attracting entrepreneurial rewards whilst the disrupt and realign existing industries
7 (Schumpeter, 1934). Entrepreneurial innovation is thereby ensuring the optimal allocation of
8 investment capital.
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12 **When Is a Shock Positive? - Innovation and Shock Therapy**

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15 How then is this cycle of innovation enhanced by economic shocks? When is a shock positive and
16 when is it negative?
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20 A shock is positive for an entrepreneur if it spurs them to adapt their business for future growth,
21 especially if it encourages them to innovate and “leapfrog” their competitors. Arguably the
22 transformation of “Off the Peg” suit manufacturer J Hepworth & Son into “Next” in the 1980’s is
23 an example of such innovation changing from “... *a tailor in the Montague Burton mould, with an*
24 *uninspiring business in off the peg suits and a less well known sideline in made to measure outfits*
25 *for the self-respecting teddy boy*” (Times, 1985) into a stylish retailer. A shock has a negative
26 effect when the company looks to cut its costs by reducing innovation, becoming a zombie
27 waiting for others to innovate away its market, or *in extremis* faces failure. Paradoxically for skilled
28 individuals, redundancy lead to “forced entrepreneurship” for individuals who cannot find new
29 employment, and this in self can lead to successful small businesses being established with 30%
30 of these firms going on to hire new employees (Hacamo *et al.*, 2016).
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37 Measuring the balance between positive and negative is challenging as measurable outcomes
38 from innovation depend upon measuring innovation; and measuring Innovation is itself complex
39 and controversial. There are risks that innovation measurements can in many cases be over
40 correlated to Research and Development (as this is often held as a “proxy” for Innovation) when
41 Innovation itself can be so much more (Roszko-Wójtowicz *et al.*, 2016). Rather than trying to
42 solve this conundrum, we suggest that relative GDP growth rates over time as alternative
43 measure can be a good indication as to the overall positive or negative contribution of shocks.
44 Using this measure, the data in **Table 1** above challenge the existence of a direct positive
45 relationship between economic shocks, innovation and growth. Innovation is implicit in GDP
46 growth rates for non primary resource (e.g. oil or mineral producing) based economies.
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52 Lin (2015) echoes Hume (1742) in arguing that development needs to be managed as
53 “Comparative Advantage” shifts across sectors in response to investment, entrepreneurship and
54 skills development. Lin cites developments in both China and Vietnam, as examples of this “state”
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process being used to manage the transition from the existing economic base notwithstanding, large scale Foreign Direct Investment. These cases differ from South Korea and Japan - countries that both also “managed” their transition to building modern industrial economies without large scale Foreign Direct Investment. Equally, notwithstanding risks that companies may choose to take support an excuse not to innovate (Sauré, 2007), there are many post 1850 examples of countries developing through either, tariff or non-tariff barrier protection, or more relevant for this case, proactive state policy (Harris *et al.*, 2015).

First Order Entrepreneurship Issues

If a Brexit shock is to improve entrepreneurial success chances arguably there needs to be an identifiable positive impact on the key enablers for entrepreneurial growth. We cite these as (i) Access to finance, (ii) skills, (iii) appropriate legal and regulatory frameworks and (iv) community and clustering. A study of youth entrepreneurship in Serbia (Bobić, 2017) found the first three of these to be key and Thompson (2010) gives a vivid account of the importance of community to entrepreneurial activity. Issues underlying these enablers implicitly raise the question how Brexit Shock Therapy or cutting taxes will raise entrepreneurial growth if these measures fail to address core market failures.

In almost any discussion of entrepreneurship and small firms, access to finance is raised as a key market failure, yet this discussion is seldom related to monetary economics or banking system regulation. In pure monetary theory, the *natural rate of interest* is equated to the *marginal product of capital* (Wicksell, 1898). In more colloquial language this asserts that the return on money – the applicable rate of interest³ – should be equal to the rate of return on the least profitable capital investment project to be financed by credit lines. Such a framework directly links the return on money to the return on business projects. The return to capital in a long term static state should match the entrepreneurial rate of return⁴, as both capital and entrepreneur have made a contribution to the project; and labour is rewarded at the going skills adjusted real wage rate (Rosamond, 2018).

The entrepreneurial growth model sees money (bank credit) created in response to entrepreneurial demand (Schumpeter, 1934) with money creation being endogenous rather than

³ “Applicable Rate of Interest” means the Wicksellian “Natural Rate of Interest” risk adjusted for “Knightian Uncertainty” (Knight, 1921) and could approximate to Keynes’s Marginal Efficiency of Capital (Keynes, 1936).

⁴ The is an *ex-post* relationship meaning equivalence should in static equilibrium be made upon the realised returns on projects as opposed to the risk adjusted anticipated returns. In reality, we are always in “dynamic disequilibrium” in a world of constant un-remitting change, meaning that divergence from the static equilibrium condition becomes a continual mainspring for ongoing adjustment as described in Marshall (1890), Schumpeter (1934) and Kaldor (1934).

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3 *exogenous* to the system (Hahn, 1920). The role of money creation in this framework is to support
4 economic growth – to support the entrepreneur’s need for finance. Banks have a critical credit
5 allocating role, a role that requires them to allocate credit to entrepreneurs to support innovative
6 investment projects that develop new products, technologies, markets and longer term the
7 positive cash flows that necessarily flow from the successful ones.
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11 Will the Brexit shock improve these funding flows when such an “entrepreneurial growth”
12 framework contradicts today’s financial world? In today’s financial markets, financial flows and
13 returns are focused upon cash flows generated from existing assets, or upon anticipated profits
14 from rises in asset (such as residential house) prices. Financialisation has broken Wicksell’s (1898)
15 *Natural Rate of Interest* relationship as flows are focused into financial asset markets, complex
16 financial products and real estate (Krippner, 2005). Part of this distortion has been caused by the
17 Basel Capital Accords regulatory framework that makes lending to small businesses more
18 expensive for a bank (through the amount of capital it must reserve against these loans) than
19 residential mortgages. The consequences are many, but a good example has been a relationship
20 between increases in the monetary stock and the rise in residential house prices (Muellbauer *et*
21 *al.*, 1997). Implicitly much of the post 1973 increase in the UK money supply has found its way
22 into asset and especially housing markets. House prices have risen exponentially in the period
23 since 1939 when compared to their historical norms (Authers, 2018). Matters have been
24 worsened by moves to automated rather than relationship lending for smaller companies,
25 meaning lending against anticipated cash flows in growth businesses has become a challenge.
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34 How we ask will Brexit improve lending flows to entrepreneurs? An important contributor to
35 difficulties that entrepreneurs have in accessing credit arises from information asymmetry
36 (Stiglitz & Weiss, 1981) Any shock implicitly suggests a rise in Knightian uncertainty (Knight,
37 1921), that is uncertainty that is difficult to model statistically and so needs to be treated
38 independently of conventional financial risk analysis. Lending Officers in banks lend against assets
39 and business track record. Regulatory frameworks encourage them to do this as they are under
40 the Basel Capital accords focused on risk weightings and through bank internal risk models,
41 statistical risk analysis. These regulatory frameworks encourage banks to seek collateral against
42 loans as calculated risks assessments can be offset by the security available from saleable
43 collateral. In a world of shocks, these risk criteria, as we saw in the post 2008 credit crunch
44 experience, tighten. Economic shocks by definition result in increased difficulties for asset lite
45 entrepreneurs to access conventional bank credit. Instead created credit flows into existing
46 assets and known companies with predictable cashflows, paradoxically creating bubble type
47 conditions in some asset markets whilst starving the innovating entrepreneur of access to credit.
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3 Some argue that this “seed” and “early stage” working and fixed capital gap should be plugged
4 by Angel and Venture Capital. In practical terms Venture Capital tends to chase fashionable
5 sectors (such as high technology) in the belief that these offer the best returns, whilst
6 entrepreneurs cover all sectors and in some lower technology ones may merely need a bank
7 credit line to support affordable working capital. This need for affordable SME working capital is
8 demonstrated by the impact of the Sardex SME focused Community Currency in Sardinia (Littera
9 *et al.*, 2017). This community currency was established to provide all SME’s in Sardinia with access
10 to additional working capital to help fund trade and business activity between them. It has proved
11 a notable success thereby demonstrating the finding gap left by today’s commercial banking
12 sector.

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17 Wicksell’s Equilibrium (1898) arrives when the *Marginal Product of Capital* matches the *Rate of*
18 *Interest* – the *natural rate of interest*. Information asymmetry, lender caution and regulatory
19 distortion all contribute to breaking a fundamental piece of the economic plumbing opening the
20 way to an overall sub – optimal equilibria (Keynes, 1936) where money is not reaching the
21 entrepreneurs who need it. These sub – optimal equilibria are also unstable and are integrated
22 into long term speculative and business cycles (Minsky, 1985). The failure of financial markets to
23 adequately finance entrepreneurs this becomes a source of overall long-term disequilibrium.
24 Failures and distortions in financial markets and the global banking regulatory system have long
25 existed (Macmillan, 1930).
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32 In conventional economic theory, the state has a justifiable role to play in correcting market
33 failures. Arguably the failure of capital allocation to support innovation and entrepreneurs
34 (necessary to drive Wicksell’s equilibrium condition for a “*natural rate of interest*” is a crucial
35 weakness in today’s UK economy. Rather than applying increased uncertainty (so accentuating
36 Lender uncertainties and information mismatches) through a Brexit shock a better alternative
37 would be to consider expanding the role of the British Business Bank so it can make substantial
38 additional funding to both Commercial Lenders and Venture Capital Firms. In taking such action
39 the state would merely be recreating some of the “magic” that supported the original industrial
40 revolution of the 1780’s by helping banking fulfil its economic as well as it financial function. One
41 only needs to look at the key role the Praed Bank of Truro had in supporting the introduction of
42 the Boulton Watt Steam Engine in the 1780’s and 1790’s (Brunt,2006) to see how important this
43 banking function is.
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50 Innovative firms are involved in all sectors, not just technology. Some firms depend upon specific
51 artisan and craft skills. For example, in the conservation and heritage industries that also
52 complement heritage tourism a survey found that under 50% of “conservation” focused roles can
53 be adequately filled (Historic England, 2013:47). Unlike Germany, vocational skills in England
54 have tended to become the poor relation to academic skills, not least because of a need for close
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3 collaboration between employers and trainers (Halász, 2011). In Germany business
4 representation structures and compulsory membership of the “Handelskammer” (Chamber of
5 Commerce) have meant there is a structural link between business and educators that has driven
6 apprenticeship and vocational training in accordance with business need (Hippach-Schneider *et*
7 *al.*, 2007). The post Brexit skills challenge is likely to grow. Brexit related immigration restrictions
8 are already causing some shortages of skilled labour, raising some labour and training costs. In
9 the very long term improving indigenous labour force skills and a rising price of labour (leading
10 to capital substitution of labour) can help raise productivity and competitiveness provided any
11 shock is not accompanied by rising uncertainty and falling capital investment.
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17 Equally entrepreneurs often need “up skilling” in specific issues (in many cases related to
18 strategic marketing concepts, business plans, cash flow projection and finance). There is scope
19 to develop University Business School delivered stand-alone components to support
20 entrepreneurs and concurrently build a bridge between the university and the entrepreneur.
21 Culkin & Malik (2011) highlight the need for Entrepreneurial Universities capable of producing
22 graduates steeped in business and innovation, and that can act as institutions to interact with
23 innovative SME’s as a source of innovation and management support. Such an approach thereby
24 focuses on developing transferrable skills such “as creativity, leadership and research analysis”.
25 Whilst “sink or swim” reacting to shocks is one learning pathway, a more conventional approach
26 would see incremental skill building aligned to future competitive strategy.
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33 Regulatory shock therapy often expressed as a bonfire of regulations inevitably leads generates
34 uncertainty as to whether a products and services will be acceptable in their key customer
35 markets. De regulators argue that countries can deregulate effectively if cross border regulation
36 in trade treaties is supported by “mutual recognition” of regulator frameworks (that allows each
37 country to go its own way within broad guiding principles) as opposed to strict regulatory
38 conformity and regulatory equivalence regimes that enforce this (Ikenson *et al.*, 2018).
39 Notwithstanding the purist approach, current trade relations globally require regulatory
40 conformity in most markets. Seeking regulatory approval for access to each major group of
41 markets is a known and accepted regulatory cost. In general firms want to maintain common
42 operational processes that can satisfy all markets as this reduces the need for differing processes
43 to conform with differing regulatory schemas.
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49 Regulatory frameworks both set the firms “market space” in which it can take actions to
50 differentiate their products and also drive some of the operational processes and associated cost
51 structures in an industry. In consequence, meeting different regulatory regimes carries a cost,
52 and the per unit of output impact of regulatory cost is *a priori* less significant if the specific
53 regulatory regime cover a critical mass of customers, such in large market like the United States
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3 or the European Union. Market gravity (the pull of being able to serve a large body of customers
4 with a single product) is one force that impels firms to follow high regulatory standards in markets
5 that may not demand them. Counterintuitively, it may be cheaper to have a single regulatory
6 process globally or regionally than one tailored to each country. Schneiberg *et al.* (2008) identify
7 a regulatory “trading up” paradigm in some markets rather than a regulatory “race to the
8 bottom” (that some economists identify as a way of ensuring products are cost effective in global
9 markets).

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14 Under the “trading up” framework, firms with globally integrated operations may choose to
15 follow the highest regulatory standards for both marketing and cost reasons. In the United States
16 this is sometimes called the “California effect” (Vogel, 1995) as firms structure products to meet
17 California’s higher standards and sell products conforming to these across the whole United
18 States. Equally, following external regulatory frameworks can limit some types of innovation, as
19 deviation from the norm can imply significant costs. A firm level study of behaviour under
20 regulation and deregulation in the US airline industry found that market innovations were far
21 stronger in the de regulated environment than in the regulated one (Norman *et al.*, 2007).

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27 Notwithstanding, business is usually looking for harmonisation, for example in medical device
28 manufacturing following of standard ISO 14385 enables to open the door to numerous markets
29 globally. Standards in this context are a race to the highest major market bar. Local moves to de
30 regulate in relatively small markets such as the UK may have little scope to impact business
31 efficiencies for those working in global markets, as regulation in these markets is often at
32 minimum a regional issue, but increasingly a global issue. Standards may be relaxed, but firms
33 may find it essential to continue working to the original higher standard.

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38 This “red tape” equation changes with regulations at the most local level, many of which involve
39 planning and local environmental consents. If over burdensome these can add significant costs.
40 But will the Brexit shock change these regulations many of which have been crafted to satisfy
41 local UK based interest groups?
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44 45 **Conclusions**

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48 In this Viewpoint piece, we have argued that *Shock Therapy* does not work every time and does
49 not automatically raise entrepreneurship and innovation levels. Shock Therapy success depends
50 upon context and upon having financial markets or inward investment streams that will allocate
51 funding flows to innovative entrepreneurs. We suspect that in most cases substantial economic
52 shocks are unlikely to help raise lending flows to entrepreneurial businesses.
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3 De regulating an already deregulated landscape is unlikely to have a high positive impact on
4 innovation rates. To the contrary, if deregulation is associated with moving away from EU norms,
5 it could lead to additional regulatory burdens. The EU will require proof of conformity and some
6 non-EU countries recognise EU regulatory standards in their own regulatory systems.
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10 Despite the “calls to battle” from ardent Brexiteers, could it be that most of the key enablers for
11 entrepreneurs remain unchanged by shock therapy and indeed may become more difficult in the
12 face of economic dislocation? Wouldn't a more productive approach be to focus on fixing existing
13 market failures? For example, in the area of small company access to entrepreneurial finance
14 (Bergset, 2018; Steigenberger, 2017); improving the routes through which small firms undertake
15 external knowledge searching, as a means of increasing innovation and business performance
16 (Roper, *et al.*, 2017; Williams-Middleton & Nowell, 2018); and, building, supporting and unlocking
17 entrepreneurial exceptionalism for all its citizens (Bagwell, 2018; Culkin & Simmons, 2018a),
18 rather than imposing an additional Economic Shock on entrepreneurs?
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Shock Therapy Table

Table 1: Relative Growth Performance Under *Shock Therapy* Russia vs Poland

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Russia	-3.00	-5.05	-14.53	-8.67	-12.57	-4.14	-3.60	1.40	-5.30
Poland	0	-7.02	2.51	3.74	5.29	6.95	6.06	6.46	4.61

Source: World Bank (2017) Origins: Russian Federation and Poland Reproduced Under: World Bank Open License