Financial Instability Hypothesis and Consumer Finance. A Marxian Perspective on Old Age Capitalism

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Abstract

The decades prior to the Global Financial Crisis (GFC) were characterized by an increase of the consumption to disposable income ratio by US households (Fazzari 2020). Debt financed consumption led to a sharp increase in household leverage and increasing fragility that erupted in the GFC. Several authors have described the crisis as typical Minskyan and the tipping point in 2007 as a "Minsky Moment" (Whalen 2007, Kregel 2008, Wray 2012). A recent working paper by Steve Fazzari provides a formal application of Minsky's Financial Instability Hypothesis to consumer finance. In this paper, I will argue that the transition from investment spending fragility to consumption spending fragility was well anticipated by Marxist thinkers such as Rosa Luxemburg or Paul Sweezy who described underconsumptionism as a "disease of old age" of capitalism. This is in line with Fazzari who argues that depressing effect of income inequality was masked by debt financed consumption. The contribution of this paper, however, is to root the economic developments since the 1980s in Marxist stages of capitalist accumulation.

Introduction

Minsky's Financial Instability Hypothesis (FIH) states that the economy transitions from stable to unstable financial relations. In addition to Keynes, who provided an investment theory of the business cycle, Minsky added that changes in the way in which investment is financed make the economy especially crisis prone. The GFC, however, was preceded by increasing household leverage. More generally, contemporary capitalism seems to reveal a relationship between the restricted consumption of wage earners and secular stagnation with cyclical financial crises (see e.g. Godley 1999, Schularick and Taylor 2012, van Treeck 2014, Stockhammer 2015, Kumhoff et al. 2015, Mian et al. 2020a, 2020b). Steve Fazzari has, therefore, applied Minsky's FIH to consumer finance. In this paper, I will argue that the transition from investment spending fragility to consumption spending fragility was well anticipated by Marxist thinkers such as Rosa Luxemburg or Paul Sweezy who described underconsumptionism as a "disease of old age" of capitalism.

I will proceed as follows. A first section summarizes Minsky's Financial Instability Hypothesis (FIH). A second section outlines Fazzari's application of the FIH to consumer finance. Section three and four provide a Marxian perspective on the rise of consumer finance based on the Reproduction Schemes of Capital Volume II and the theoretical dispute between Rosa Luxemburg and Michail Tugan-Baranowsky.

1. Minsky's Development of the Financial Instability Hypothesis

The FIH can be seen as the assemblage of several of Minsky's influences: Schumpeter, Fisher, Keynes and Kalecki. Minsky started his PhD in Harvard under the supervision of Schumpeter who had an evolutionary and institutionalist understanding of the economy. According to Schumpeter, the economy does not converge toward a unique and stable equilibrium but economic agents endogenously disequilibrate the system by innovation (2011(1947) Chapter 3). Minsky applied Schumpeter to finance, so banks act as profit maximizing firms that try to circumvent regulation by financial innovation (1992a).[1] In one of his first papers Minsky writes that "evolutionary changes in

1 "The financial instability hypothesis, therefore, is a theory of the impact of debt on system behavior and also incorporates the manner in which debt is validated. In contrast to the orthodox Quantity Theory of money, the financial instability hypothesis takes banking seriously as a profit-seeking activity. Banks seek profits by financing activity and bankers. Like all entrepreneurs in a capitalist economy, bankers are aware that innovation assures profits. Thus, bankers (using the term generically for all intermediaries in finance), whether they be brokers or dealers, are merchants of debt who strive to innovate in the assets they acquire and the liabilities they market. This innovative characteristic of banking and finance invalidates the fundamental presupposition of the orthodox

the money market result in both new kinds of assets and new kinds of financial institutions" (1957, p. 185). Based on Keynes's analysis that the business cycle is driven by fluctuations in investment[2], Minsky argued that the way in which investment is financed crucially affects those fluctuations.

Minsky analyzed the economy with a two price system, one for current output that is given by a cost plus mark up setting in which prices enforce a surplus to validate debts, and one for capital assets where the demand price is given by the capital assets discounted expected cash flow (Minsky 1978). The demand price for capital assets is depicted by a downward sloping curve due to the declining marginal efficiency of capital as new competitors arise, a fall in the capacity utilization rate, uncertainty and Kalecki's "principle of increasing risk" (Fazzari 2020 p.3). If the price for capital assets exceeds the price for current output, the economy expands, as the demand price for capital is above its supply price which is part of current output as capital assets are produced means of production. Minsky concludes that the "[b]usiness cycle results from a dance of these two price levels" (1986 Chapter 7, 1993 p. 18[3]).

Minsky employs Keynes's concepts of borrowers' and lenders' risk which matter whenever investment expenses exceed retained earnings (Minsky 2008(1975) Chapter 5), which is usually the case as "a decision to invest – to acquire capital assets – is always a decision about a liability structure (…) [i]nvestment is therefore a financial phenomenon" (Minsky 1986, p.192 and 209). Lenders' risk shows up in contracts as the financing condition such as interest payments (Minsky 2008(1975) p.109-10). Borrowers' risk refers to the uncertainty of the borrower about not being able to pay back the loan and therefore losing her collateralized assets.

Another building block for the later development of the financial instability hypothesis is the Kalecki profit equation according to which aggregate profits equal capitalist consumption, investment, the government deficit and net exports minus saving out of wages. As capitalist consumption and saving out of wages are negligible, profits in a closed economy are mainly driven by investment and the budget deficit of the government. Minsky applies Kalecki to time, so the

Quantity Theory of money to the effect that there is an unchanging "money" item whose velocity of circulation is sufficiently close to being constant: hence, changes in this money's supply have a linear proportional relation to a well defined price level" (Minsky 1992a p.7).

2 In his rebuttal to Viner, Keynes writes that the General Theory "can be summed up by saying that (…) the level of output and employment as a whole depends on the amount of investment (…) that factor which is most prone to sudden and wide fluctuations." (1937, p. 221)

3 "business cycles mainly result from interactions between payment commitments, which arise in the process of financing investments and positions in capital assets, and the flows of gross capital incomes, which are determined by the structure of aggregate demand: business cycles are endogenous in capitalist economies." (Minsky 1993, p.18)

capital stock today depends on expectations in the past, but its profitability depends on investment today which depends on expectations on the future (Minsky 1978, 1992a). Firms compete by setting cost plus mark up prices in order to get a share of the aggregate profit which is determined by the Kalecki equation (1993 Chapter 4).

Diagram 5.4 The Financing Behavior of a Representative Firm

(Minsky 2008(1975) p.106)

The business cycle can now be explained with the diagram above. A cycle starts with high borrowers' and lenders' risk, so the level of investment is relatively low. The aggregate profits from the additional investment are sufficient to validate the debt. Firms that can repay both principle and interest of their loans are called hedge units (Minsky 1978). As debt is validated, some firms engage in higher risk taking as the past risk is considered to having been to low.[4] The additional investment again raises aggregate demand and thereby profits and the ability of firms to service their debt.[5] However, as debt is validated, fragility increases as well. The resulting dynamic is described by Fazzari as a stress test of a rod where increasing amounts of weights are put to the ends of it. The nature of the test, however, requires the rod to ultimately break (Fazzari 2020. p.17). Therefore, Keynes writes in the General Theory that "[d]uring a boom the popular estimation of both these risks, both borrower's and lender's risk, is apt to become unusually low and imprudently low" (1997(1936) p. 145). When debt is validated, risk as measured by the standard deviation of returns decreases leading to less collateral as hedge, while the actual

4 "Validation lowers the perception of borrowers' and lenders' risk and encourage even greater risk taking." (Fazzari 2020 p.9)

5 "When someone takes a more aggressive financial position, lending to a new business with uncertain returns for example, this activity raises aggregate demand and creates new cash flows. In this sense Minsky is both a Keynesian (greater demand raises incomes) and a Kaleckian (higher investment raises profits). The higher cash flows *validate* the somewhat more aggressive financial positions creating success and profits for the new risk takers." (Fazzari 2020, p.9)

distribution of returns remains unchanged (Kregel 2008). Tymoigne and Wray write that "[i]t is a central point of Minsky's approach that lending norms loosen over time and that what was previously considered excessively risky funding methods may become commonly accepted." (2014 p.27).

Close to the peak of the cycle, finance becomes inelastic as banks become more cautious or the central banks raises interest rates (Minsky 1978). Some firms only have access to short term financing for long term positions and soon need to role over their debt every night. Firms that have cash flows that only cover interest payments but need to role over the principle are called speculative units by Minsky (ibid.). The inwards rotation of lenders' and borrowers' risk leads to a decline in investment (Fazzari 2020). As investment declines, aggregate demand and aggregate profits decline so that some firms cannot validate their debt with received cash flows. Those units have to sell assets to service their liabilities, or in Minsky's terms, they have to sell position to make position (Minsky 1978)[6] triggering a debt deflation dynamic as described by Fisher.

After loosing nearly all his wealth in the stock market crash of 1929, Irving Fisher sincerely questioned the economic theory on which his engagement in financial markets was based. In 1933 he published an article that explained the Great Depression as a debt deflation. When the economic system was highly leveraged in 1929, agents had to start selling assets in order to service their debt commitments. Since liquidity does not exist in the aggregate (abstracting from government debt), the collective attempt to liquidize assets leads to a downward price shock (Keynes 1997 (1936), p. 155).

Fisher argued that a decline in asset prices leads to a decline in bank lending, which, according to the Quantity Theory of Money to which he stuck, depresses the price level. As the price level declines, the real burden of debt increases making the old liability structures even more vulnerable. Agents have to sell even more assets to service those, leading to a vicious downward spiral. While Fisher takes the over indebtedness as exogenous, Minsky's FIH employs Keynes's investment theory of the cycle and adds finance to endogenously explain the increasing leverage. Minsky, of course, abandoned the Quantity Theory. In his theory, the price level for current output declines as firms go bankrupt and thereby depress aggregate demand.[7]

6 The process of selling financial assets or liabilities to fulfill cash-payment commitments is named "position making" (Minsky 2008(1975) p.124).

7 Based on the different conception of money, Post-Keynesians have different explanations for inflation, here understood as the increase of the price level of current output. The cost plus mark-up approach to pricing contains the possibility of cost push pressures (input prices, wage increases) and demand pull types of inflation.

To sum up, the FIH endogenously explains business cycles from changing financial relations. It adds a financial theory of investment to Keynes's investment theory of the cycle as "monetary and financial institutions will affect the path of the economy through time" (Minsky 1993 p.17). Validation increases fragility by adaptive expectations under uncertainty (Fazzari 2020 p. 9) leading to Minsky's famous notion that stability is destabilizing (Minsky 2008(1975) Chapter 6)[8], moving the financial system from hedge, to speculative to Ponzi in terms of cash flows relative to debt services (Minsky 1978). In a Ponzi state and the following debt deflation, even healthy firms will stop debt financed investment but use their retained earnings to service debt and thereby even further reducing aggregate profits (Minsky 2008(1975) p.139)[9].

Some have argued that such cyclical behavior of firms is irrational, however, as Fazzari writes: "Agents do not know how and when each expansionary phase will end, but they certainly recognize the profits made by those that ride the rising tide upward, and validation keeps the expansion going." (2020 p.18). Or in the word of Chuck Prince of Citigroup: "As long as the music is playing, you've got to get up and dance" (Financial Times 2007).

2. Fazzari's Application of the FIH to Consumer Finance

We have seen that Minsky's FIH is applied to investment finance based on Keynes's analysis of investment fluctuations causing business cycles. In *John Maynard Keynes* Minsky reiterates that the other big component of aggregate demand, consumption, "behaves as the predictable passive-reactor part of total endogenous spending." (2008(1975) p.25).[10] Keynes's consumption theory is mainly preoccupied with potentially low propensities to consume declining the multiplier and

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Additionally, inflation can occur when workers and capitalists struggle over their respective shares of total output. A further contribution was made by the late Minsky arguing that in the aggregate, the mark ups need to be sufficient to service the debt for investment and that, therefore, the lower investment, the lower the mark-ups and the lower inflation of current output (Minsky 1992b p.9). Arestis and Sawyer conclude: "Money is generated within the inflationary process, and the rate of inflation influences the rate of increase of the stock of money, but money itself does not in any sense *cause* inflation (even if money and prices grow at similar rates)" (2006 p.8).

8 "Stability—even of an expansion—is destabilizing in that more adventuresome financing of investment pays off to the leaders." (Minsky 2008(1975) Chapter 6)

9 "the burden of debt increases in a deflation. Under these circumstances we can expect the willingness to go into debt to finance investment to decrease. (...) Furthermore, as prices and wages fall, the realization spreads that speculative gains can be earned by holding money: velocity will tend to decline. Instead of levering retained quasi-rents to finance investment, firms will use retained quasi-rents to decrease debts. A wage deflation can be expected to lead to a fall in real investment below the level at which the initial excess supply of labor existed. Downward wage flexibility, in a situation with unemployment, will make things worse" (Minsky 2008(1975) p.139). The last sentence attacks the New-Keynesian interpretation of Keynes.

10 Keynes: "consumption demand is passive, as it "depends mainly on the level of income" (QJE, p.219)

depressing aggregate demand.[11] However, Minsky acknowledges that externally financed consumption can also lead to instability without developing those ideas further on an analytical level (ibid. p.27), probably because consumer finance was highly regulated and highly collateralized during Minsky's formation and the early decades of his career (Fazzari 2020 p. 19).

As discussed in the introduction, the decades prior to the GFC were characterized by increasing household leverage and a propensity to consume out of income above 1 for a significant proportion of the US population (Iacoviello 2008). This period is described by Cynamon and Fazzari as the "Consumer Age" (2008). Fazzari applies Minsky's FIH to this type of consumer finance. Fazzari argues that increasing household leverage masked the depressing effect of income inequality on aggregate demand, growth and employment for the three decades preceding the GFC (2020 p.1). An example for this is the recovery from the 2000/01 recession in which business investment collapsed but consumer spending did not (Fazzari 2020 p.20). From a Kaleckian perspective, a propensity to consume above 1 increases profits.

According to Fazzari, one of the main drivers for increasing household leverage was an institutional change initiated by the Reagan tax reform act of 1986 which ended tax deductions for interest payments except for loans that were secured by the borrower's real estate. This led to a boom of home equity lines of credit (HELOC) as borrowers' and lenders' risk declined (Fazzari 2020 p.22). On the supply side, deregulation and especially the emergence of securitized loans increased the supply of credit. Minsky was already aware about the link between securitization and financial globalization in the 1980s as it allowed foreign investors to engage in the US real estate market without doing costly underwriting. Loans were no longer made in expectation of repayment but originated to be distributed (Minsky 1987, 1988a, Whalen 2017). In 1987 Minsky describes a "symbiotic relation between the globalization of the world's financial structure and the securitization of financial instruments" and states that "[t]hat which can be securitized will be securitized" (p.1-2). Asset based lending replaced income based lending in the 2000s (Tymoigne 2014). This resulted in a range of moral hazards: housing overvaluation, credit rating agencies overvaluing mortgages or hedge funds holding credit defaults swaps on other unit's mortgages (Wray 2012). Mortgages were bundled and sold in tranches of which some were rated triple A allowing institutional investors such as pension funds to participate (Kregel 2008). The supply of

11 "The fundamental psychological law, upon which we are entitled to depend with great confidence both *a priori* and from our detailed knowledge of human nature and from the detailed facts of experience, is that men are disposed, as a rule and on the average to increase their consumption as their income increases, but not by as much as the increase in their income" (Keynes 2016(1936) p.96).

mortgages increased the demand for houses which increased house prices which increased the value of collateral for HELOC credits in a pro-cyclical manner (Wray 2010, Adelino et al. 2012, Favara and Imbs 2015, Di Maggio and Kermani 2017). Even subprime borrowers saw their house prices increasing which increased their equity share in their homes which made them qualifying for prime refinancing (Kregel 2008, Mian and Sufi 2019). However, this ended when the FED raised rates in 2004. Kregel describes how the bundling of mortgages and selling of tranches decreased the margins of safety over time (2008)[12]. Speculative finance took over when investment banks financed their positions by overnight commercial papers (Fazzari 2020 p.17).

Fazzari links his application of the FIH to consumer finance to economic inequality and secular stagnation. Income inequality led to a decline of aggregate demand due to the Kaldorian relation of higher incomes having a higher savings rate (Palley 2002, Dynan et al. 2004, Saez and Zucman 2016). Growing indebtedness by households validated past indebtedness similar as in the investment based FIH as described above (Fazzari 2020 p.16). Despite babyboomers being in their high earnings years in the 1990s and 2000s, the savings rate declined which is contrary to the predictions of the consumption smoothing theories (Fazzari 2020 p.20). Fazzari concludes: "[N]ow that unsustainable household borrowing no longer props up household demand, the chickens of inequality-induced demand drag have come home to roost. High and rising economic inequality explains secular stagnation of household demand, stagnation that was hidden during a nearly three-decade Minsky cycle" (Fazzari 2020 p.24).

This explains why the recovery from the GFC has been so sluggish in real terms.[13] While firms go bankrupt during a crisis and see their debts cleared households with bad credit records stay causing a permanent decline in GDP (ibid.).

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12 Fazzari cites Boykin Curry, managing director of Eagle Capital: "For 20 years, the DNA of nearly every financial institution had morphed dangerously. Each time someone at the table pressed for more leverage and more risk, the next few years proved them 'right'. These people were emboldened, they were promoted and they gained control of ever more capital. Meanwhile, anyone in power who hesitated, who argued for caution, was proved 'wrong'. The cautious were increasingly intimidated, passed over for promotion. They lost their hold on capital. This happened every day in almost every financial institution over and over, until we ended up with a very specific kind of person running things." (Fazzari 2020 p.19-20)

13 "While in early 2020 the current cycle has yet to hit its peak, there is no indication that per capita real GDP will come anywhere close to its previous peak-to-peak growth trend before the next recession begins. Perhaps more striking, 2017 real GDP was about 12 percent below the 10-year-ahead Congressional Budget Office forecast of the economy's potential output made in 2007. In 2019, a 12 percent gap between what the US actually produced and the past trend amounts to $2.6 trillion, or about $20,000 per year for every American household. Something happened to the growth trend of the U.S. economy after the Great Recession and it was very big." (Fazzari 2020 p.22)

In the following, I will argue that the shift from investment fluctuation towards consumption fluctuation can be explained from a Marxist perspective. While the early phase of capitalism is driven by large capital investments, old age capitalism depends on consumption (Sweezy 1946(1942)). I will start by summarizing the reproduction schemes of the second volume of Capital on which the argument in section four is based.

3. Marxian Reproduction Schemes

In chapter XXI of the second volume of Capital, Marx sketches various reproduction schemes that will be quickly summarized. His model consists of two branches, one producing means of production (I), and the other producing means of consumption (II). In both sectors "double free" workers[14] sell their labor power v_i as variable capital to capitalists that own constant capital c_i from previous accumulation. Since workers produce more value than they require for their own reproduction, the capitalists are able to appropriate a surplus value s_i.

The output in sector (I) is given by:

$$v_1 + c_1 + s_1 = q_1$$

And the output in sector (II) is given by:

$$v_2 + c_2 + s_2 = q_2$$

By abstracting from accumulation, in equilibrium, the output of the means of production sector will be equal to the demand for constant capital in both sectors $c_1 + c_2 = q_1$, as will the output of the means of consumption sector equal the demand for consumption goods in both sectors $v_1 + s_1 + v_2 + s_2 = q_2$. This is what Marx calls simple reproduction. However, conversely to the feudal landlords, capitalists are under constant pressure to secure their *de facto* social position by surviving competition (Heilbronner 1988, chapter 2). Therefore, it is very unlikely that they will consume all the surplus value appropriated from the workers but rather invest the biggest part in new variable and constant capital. In the extended reproduction schemes, surplus is divided into four parts.[15]

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14 After the violent removal of the peasants from the British fields in the 18th century, the majority of the working population found itself free in a double sense: free from forced labor as in feudalism but also free from property (Marx 1990(1867), Chapter 4)

15 I use the same notation as Sweezy (1946(1942), chapter 10).

s_{ci} - which allows the capitalist to maintain its level of consumption

$s_{\Delta ci}$ - which allows the capitalist to expand its level of consumption

s_{avi} - which allows the capitalist to augment variable capital

s_{aci} - which allows the capitalist to augment constant capital

Hence, s_{avi} can be seen as the additional demand for labor and s_{aci} as the net capital investment.

The reproduction scheme looks as follows:

Output of (I): $v_1 + c_1 + s_{c1} + s_{\Delta c1} + s_{av1} + s_{ac1}$

Output of (II): $v_2 + c_2 + s_{c2} + s_{\Delta c2} + s_{av2} + s_{ac2}$

In equilibrium, the value of the demand for constant capital in (II) equals the value of the demand for means of consumption in (I):

$$c_2 + s_{ac2} = v_1 + s_{c1} + s_{\Delta c1} + s_{av1}$$

Marx starts chapter XXI by describing the implications of withdrawing value from the circulation in the form of hoarding money as a “dead weight on accumulation (1992a(1893), p.504).[16] He provides the example of the first branch selling machinery to the second without using this money to purchase means of consumption which causes an overproduction of means of consumption in branch (II) (ibid. p.508). This observation is linked to his earlier point that money in its double function as a means of transaction and a store of value has the potential of disequilibrium (ibid. p.500). Marx calls an equilibrium “arbitrary” (ibid. p.502).

The implications of the reproduction schemes led to a discussion between Marxist thinkers at the turn of the 19th century. The debate is centered around the question of whether capitalism leads to crises due to disproportionality between the sectors (Tugan-Baranowsky) or due to the restricted consumption of the masses (Luxemburg).

16 In the first volume of Capital Marx writes: “while the miser is merely a capitalist gone mad, the capitalist is a rational miser” (1990(1867) p.107)

4. Luxemburg, Tugan and the Stages of Capitalism

The Russian economist Michail Tugan-Baranowsky argued that if branch (II) has not the effective demand to purchase additional means of production, the excess supply of branch (I) can be absorbed as a net investment by the branch itself causing a movement of workers from branch (II) to branch (I). Output of the means of consumption branch subsequently declines as social consumption does, without, however, impeding capitalist accumulation (Milios and Sotiropoulos 2007, p.10). In *Studies on the Theory and History of commercial crises in England*, Tugan-Baranowsky developes an attack on underconsumptionist theories:

> *"If social production were organised in accordance with a plan, if the directors of production had complete knowledge of the demand and the power to direct labour and capital from one branch of production to another, then, however low consumption might be, the supply of commodities could never outstrip the demand." (cited in: Sweezy, 1946(1942), p.166).*

The theories of Tugan-Baranowsky shook the Marxist orthodoxy at the beginning of the 20th century. When his book was first translated into German and published in Jena in 1901 it induced an immediate response by the leading Marxists of that time, Karl Kautsky, Rudolf Hilferding, but also by Louis B. Boudin, Vladimir Ilyich Lenin and Rosa Luxemburg who were dominantly sticking to an underconsumptionist theory of crisis according to which the restricted consumption of the masses will ultimately lead to the overturn of capitalism (Clarke 1993, p.33).

In her 1913 book *The Accumulation of Capital*, Rosa Luxemburg employs the reproduction schemes of Marx and the notion of the demand gap within the capitalist process of accumulation to derive her theory of imperialism. She argues that capitalism can only expand by incorporating either new activities or new regions into the sphere of capitalism (Schmidt 2010) since the capitalists do not produce sufficient domestic effective demand which echoes Marx's early thoughts from the *Grundrisse*.[17] Luxemburg recognized credit as a "key tool" for stabilizing aggregate demand (2003 (1913), chapter 30). For Rosa Luxemburg, credit is exactly the means by which the capitalist system

17 "In relation to each capitalist the total mass of all workers except his own appear not as workers, but as consumers. Each capitalist knows that he does not confront his own worker as a consumer, and so he wants to restrict his consumption as much as possible. But of course, he wants the workers of other capitalists to be the greatest possible consumers of his commodity. Yet the relationship of each capitalist to his workers is the general relationship of capital and labour, the essential relation." (Marx 1986 (1857), p. 349)

temporarily removes its inherent limits.[18] However, this channel only postpones and at the same time intensifies the ultimate adjustment. Compared to investment in capital assets, consumer loans do not generate any immediate income flow of repayment apart from the effect on aggregate demand which *might* trickle down towards an increase in employment. Without credit, overproduction is small and so is the expected fall in prices. With credit, the demand gap can be extended and widened over a longer period. Importantly, the underconsumptionist view finds also some support in the Capital of Marx. In the third volume, he writes:

> *"The last cause of all real crises always remains the poverty and restricted consumption of the masses as compared to the tendency of capitalist production to develop the productive forces in a way that only the absolute power of consumption of the entire society would be their limit." (1992b (1894), p. 568)*

In summary, for Luxemburg cyclical fluctuations might occur due to disproportionality without, however, offsetting the secular trend of underconsumptionism. This is conversely to Tugan-Baranowsky (Clarke 1993 p.35). Hence, for Luxemburg, the profit seeking endeavor necessarily disequilibrates the branches of production and a potential equililibrium expansion of both is a "vulgar illusion" based on Say's law[19] (Stützle 2014). At first glance, Tugan-Baranowsky and Luxemburg seem contradictory. Is capitalism limited by its own barriers or can it theoretically expand indefinitely?

In chapter 10 of his 1942 book *The Theory of Capitalist Development* Paul M. Sweezy comes up with a formal reconciliation of the underconsumptionist and the disproportionality view on capitalist accumulation. Similar to Luxemburg (who he accuses of logical fallacies) Sweezy argues that Tugan-Baranowsky's limitless expansion of capitalism is based on assuming an equilibrium of

18 In her articles for the Leipziger Volkszeitung which were later published as *Reform or Revolution* she argues that the credit system is the means by which the ultimate crisis is postponed: "If it is true that crises arise from the contradiction between the capacity, and tendency, of production to expand and the limited capacity of the market to absorb the products, then, in view of the above, credit is precisely the means whereby this contradiction is brought to a head as often as is possible. In particular, it vastly increases the rate at which production expands, and it provides the inner driving force which constantly pushes production beyond the limits imposed by the market. But credit cuts both ways. Having brought about overproduction (as a factor in the productive process), it then, in the subsequent crisis, assumes its character as a means of circulation and demolishes all the more thoroughly the very forces of production it helped to create. ...Put in very general terms, the specific function of credit is none other than to remove the last vestiges of stability from the capitalist system . . . credit reproduces all the main contradictions of the capitalist world. It pushes them to the point of absurdity, it convicts capitalism of its own inadequacies, and it hastens the pace at which capitalism speeds towards its own destruction, the collapse." (cited in: Tudor and Tudor 1988, pp. 252–253)

19 "The view that production of means of production is independent of consumption is naturally a vulgar economic fantasy of Tugan-Baranowsky" (Luxemburg (2003 (1913), p. 291)

supply and demand (1946(1942) p.166) which Luxemburg had compared to assuming Say's law (2003 (1913) p.302-3). He starts by arguing that Marx's theory of crisis is incomplete (which is shared by many Marxist authors) but stresses that Marx would have worked out a sophisticated underconsumptionist theory of crisis if he had lived to finish his work (1946(1942), p.178). This is in line with the position taken by Joan Robinson in her *Essay on Marxian Economics* (1942, p.49-50).[20] However, this is by no means the traditional underconsumptionist view solely based on the restricted consumption of the workers, but, according to Sweezy, a theory that shows underconsumption as a special case of the disproportional expansion of both branches. Sweezy uses Marx's assumptions that workers consume the whole value of their labor power and that capitalists increase consumption only at a decreasing rate.

It follows that

(1) investment as a share of surplus value increases

(2) consumption grows less than means of production

(3) productive capacity increases

(4) the consumption goods sector grows faster than the demand for consumption goods

Sweezy concludes that it is incorrect to see underconsumptionism and disproportionality as mutually exclusive but that "underconsumption is precisely a special case of disproportionality – disproportionality between the growth of demand for consumption goods and the growth of capacity to produce consumption goods" (1946(1942) p.184).

The discussion has shown that the perspectives of Tugan-Baranowsky and Luxemburg can be reconciled as describing different motions of capital. Tugan is correct in emphasizing the accumulation of exchange values as the logic of capitalist production and in laying out the proportional growth paths. Luxemburg is correct in identifying the importance of credit and imperialism for the capitalist accumulation. Therefore, I argue, we can understand the controversy between Luxemburg and Tugan-Baranowsky as pointing towards different stages of the capitalist accumulation on which different motions of capital reflected how the surplus was absorbed. Tugan seems to describe the industrialization where the largest part of the surplus value was absorbed by an ever increasing means of production sector. Finally, however, those means of production

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20 "(…) the consumption-good industries will not expand fast enough to absorb the potential output of the capital-good industries." (Robinson 1942, p. 49)

produced means of consumption that had to be sold to the restricted effective demand of the domestic population. This opens the door for a new stage of accumulation by the extension of credit to domestic workers as well as to non-capitalist regions as described by Luxemburg. This is why Sweezy calls underconsumptionism a “disease of old age” of capitalism (1946(1942) p.189). It is important to note that both forms of accumulation ought not to be seen as occurring in a strict historical order but that both exist simultaneously, however, more pronounced at certain places at a certain time.

Since the 1970s rates of profit have been restored due to increased indebtedness of governments but, most importantly, of households as well (Maniatis 2012, Basu and Vasudevan 2013, Lapavitsas and Mendieta-Muñoz 2016, Mian and Sufi 2018, Mian et al. 2020a). In his book *Profiting without Producing* Costas Lapavitsas argues that “financialization is a characteristic trend of mature capitalism ultimately deriving from the production of a ‘surplus’ that cannot easily be absorbed” (2013, p. 5). This very unstable creation of aggregate demand has erupted in the form of cyclical financial crises and most importantly in the one of 2007/8 (Stockhammer 2015). Growth over the past decades has been a “Global Ponzi Scheme” (Hudson 2015) where consumer loans cannot be paid back due to stagnant or decreasing real wages (see e.g. Iacoviello 2008, Kopczuk et al. 2010, Kuhn et al. 2020). This regime of surplus absorption reduced capacity utilitzation and keept unemployment higher than it could be (Nersisyan and Wray 2020)[21]. A symptom of this is the increase in fictitious capital, hence “claims over wealth that is yet to be produced” (Durand 2017, p. 1). Capitalists increasingly accumulate of drawing rights by hoarding financial products (Mazzucato 2018, chapter 4).

Conclusion

In this paper, I have argued that the transition from volatile investment financing towards volatile consumption financing can be explained by the debate between Tugan-Baranovsky and Luxemburg and Sweezy’s reconciliation of both positions by describing underconsumptionism as capitalism’s “disease of old age”. Applying Minsky’s FIH to consumer finance is the logical conclusion which helps to better understand the debt cycles generated by realization problems due to

21 “We have been living below our means for two generations” (Nersisyan and Wray 2020, p.15)

underconsumptionism. This also holds for Minsky's insight that central banks ex post legitimize the use of financial innovations, here related to consumption.[22]

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