Summary of the Research on Helicopter Money

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Table 1 presents the estimations of the Marginal Propensity to Consume (MPC), that is, the fraction spent out of windfall gains. For example, the MPC of a household who spends 60 EUR out of a 100 EUR windfall gain is 60%.

Table 2 focuses on the macroeconomic effects, such as economic growth or inflation.

We intend to keep this table up to date. Please feel free to contact us (baptistemassenot@gmail.com) if you have comments or suggestions.

Table 1: Marginal Propensity to Consume							
Paper	Country (ies)	Sample size	type of transfer	Amount distributed	Type of data	What is the MPC?(if possible across the income distribution)	Other remarks
Agarwal and Qian (2014)	Singapore	treatment (36,989), control (23,268)	Government dividend for Singapore nationals (foreigners are used as a control group)	78 to 702 USD	bank-account data	80% (97% for bottom-quartile checking-account balance, 33% for top-quartile)	
Andreolli and Surico (2021)	Italy	4,524	hypothetical payment	1-month and 1-year income	survey	1-month income: 48% (from 70% for lowest cash on hand to 25% for highest cash on hand) 1-year income: 44% (slightly increasing with cash on hand)	
Astellon Capital Partners	Germany, France, Italy, Spain	2,559	hypothetical monthly payment	300 EUR per month	survey	50% said they would spend it (not an MPC)	Basic income, not temporary helicopter money

Baker et al. (2020)	US	6,033	universal payment (corona stimulus), with phasing out at 75k USD	1,200 USD per adult	transaction data from a nonprofit fintech	25-30% (34% for individuals earning less than 1k USD per month, 13% for individuals earning more than 5k USD)	Period is only a few weeks
Christelis et al. (2019)	Netherlands	1,543	hypothetical payment	1-month and 3-month income	survey	1-month income: 39% 3-month income: 37% (MPC is 6% higher for 1st quartile cash-on hand)	Also study income declines and find stronger MPC
Drescher et al. (2020)	17 European countries	58,515	hypothetical payment	1-month income	survey	33-57% (decreases with household income but no relationship with wealth)	
Djuric and Neugart (2017)	Germany	4,900	hypothetical payment	1,200 EUR	survey	40%	No significant difference between payment types: lottery, one-time vs multiple-time payments, money-financed stimulus
Fagereng et al. (2021)	Norway	23,000	lottery prize	1-150k USD	administrative data	51% (46% for top-quartile liquidity, 62% for bottom-quartile, no significant relationship with income)	
Feldman and Heffetz (2020)	Israel	1,002	universal	220 USD per adult, 15 USD per child	survey	28-42% (Respondents only report whether they would mostly spend it. The MPC estimates are based on various assumptions about how much they would spend)	Response to covid crisis

Fuster et al. (2020)	US	2,856	hypothetical payment	500 USD or 1,500 USD	survey		Also study the effect on a future payment and of a negative income shock. Unlike other studies, respondents first report whether they would spend anything at all and then report how much they would spend
ING (2016)	12 European countries	11,795	hypothetical monthly payment	200 EUR per month for 12 months	survey	26% said they would spend it (not an MPC)	
Jappelli and Pistaferri (2014)	Italy	7,950	hypothetical payment	1-month income	survey	48% (11% decline going from bottom to top income quintile, 26% decline going from bottom to top quintile cash on hand)	
Johnson et al. (2001)	US	13,066	tax rebate received by two thirds of households	300 USD or 600 USD	survey	50-70% (only nondurables*) 75 for low-income households (<34k$), 38% for high-income (>69k$)	
Kueng (2018)	US (Alaska)	1,379	universal government dividend	1,650 USD on average per individual, including children	transaction-level data from a personal finance website	24% (only nondurable* spending) 70% for top-income quintile and 10% for bottom-quintile	Increasing with income!

Neri et al. (2017)	Italy	1,570	tax credit for workers with gross annual income between 8,145 and 26,000 EUR	80 EUR per month (on average)	survey	50-60%	
Parker et al. (2013)	US	17,478	universal tax rebate/payment with phasing out at 75k USD	up to 600 USD per adult, 300 USD per child	survey	50-90% (20% for rich households (>75k USD), 72% for poorest households (<24k USD)	The MPC is measured over 3 months, estimates very similar over 6 months Also provide MPC estimates for nondurables* only
Sahm et al. (2012)	US	590	tax rebate targeted to workers	up to 400 USD	survey	13% reported they would mostly spend it (not an MPC)	12% of households do not know if they received the tax rebate
Sahm et al. (2012)	US	356	payment targeted at retirees	250 USD	survey	30% reported they would mostly spend it (not an MPC)	
van rooij and de Haan (2016)	Netherlands	2,223	hypothetical payment	500 and 2,000 EUR	survey	34% out of 500 EUR 28% out of 2000 EUR (Similar across wealth and income tertiles)	

* Examples nondurable goods are food, services, entertainment, etc. Examples durable goods are cars, furniture, etc. Some studies only report nondurable spending either because they do not have data on durable spending or because they believe that including durable spending would inflate the MPC too much (since durable goods are typically large purchases that last for a long time).

Table 2: Macroeconomic Effects							
Paper	Model used	Assumptions	How was it transferred?	Macroeconomic effect			Other remarks
				On inflation	On growth	Others	
Altermatt (2017)	New Monetarist		Universal helicopter drop	+	?	Welfare decreases	
Bilbiie and Ragot (2020)	New Keynesian with heterogeneous agents		Universal helicopter drop	+	+	Provides liquidity insurance	
Buiter (2003)	Endowment economy and New Keynesian	Fiat base money is an asset of the holder but a liability of the issuer (government)	Universal helicopter drop	+	+		
Buiter (2014)	Consumption-saving model	Money-in-the-utility function	Universal helicopter drop	(+)	(+)		The model has no supply side, so it cannot derive implications for growth and inflation. However, helicopter money stimulates aggregate demand, which we can reasonably expect to increase growth and inflation
Carter and Mendes (2020)	New Keynesian	Interest-bearing reserves	Universal helicopter drop, debt-financed transfer	+	+		Money- and debt-financed transfers are equally effective

Gali (2020	New Keynesian		Universal helicopter drop	+	+	Welfare increases if output is sufficiently below its potential	
Harrison and Thomas (2019)	New Keynesian	Interest-bearing money, Government bonds are perceived as net wealth	Universal helicopter drop, debt-financed transfer	+	+		
Michaillat and Saez (2014)	New Keynesian	Wealth in the utility function, labor market frictions	Universal helicopter drop	+	+	Unemployment decreases	
Renault and Savatier (2021)	Econometric	Narrative approach		+	+		A drop of 1% of GDP increases inflation by 0.5%
Wolf (2021)	New Keynesian	Uninsurable idiosyncratic risk	Universal helicopter drop	+	+	Disproportionately stimulates consumption of the poor	
Woodford and Xie (2020)	New Keynesian	Limited foresight	Universal debt-financed transfer	+	+	Welfare increases under some conditions related to monetary and fiscal policies	

+ refers to a positive effect of helicopter money or of the transfer on the variable of interest.

(+) means that we can reasonably expect the effect of helicopter money to be positive although this is not explicitly shown by the author.

? means that the effect of helicopter money on the variable of interest has not been reported.

References

Agarwal, Sumit, and Wenlan Qian. "Consumption and debt response to unanticipated income shocks: Evidence from a natural experiment in Singapore." American Economic Review104.12 (2014): 4205-30.

Altermatt, Lukas. "Inside money, investment, and unconventional monetary policy." Working paper (2019).

Andreolli, Michele, and Paolo Surico. "Less is More: Consumer Spending and the Size of Economic Stimulus Payments." Working paper (2021).

Astellon Capital Partners, notes n°22, Helicopter Money – Let It Rain? A reality check survey of 2,500 individuals across Europe

Baker, Scott R., et al. "Income, liquidity, and the consumption response to the 2020 economic stimulus payments." Working paper (2020).

Bilbiie, Florin O., and Xavier Ragot. "Optimal monetary policy and liquidity with heterogeneous households." Review of Economic Dynamics (2020).

Buiter, Willem H. Helicopter money: irredeemable fiat money and the liquidity trap. Working paper (2003).

Buiter, Willem H. "The simple analytics of helicopter money: Why it works-always." Economics 8 (2014).

Buiter, Willem. Central Banks as Fiscal Players: The Drivers of Fiscal and Monetary Policy Space. Cambridge University Press (2020).

Carter, Thomas J., and Rhys R. Mendes. The power of helicopter money revisited: A new Keynesian perspective. Working paper (2020).

Christelis, Dimitris, et al. "Asymmetric consumption effects of transitory income shocks." The Economic Journal 129.622 (2019): 2322-2341.

Djuric, By Uros, and Michael Neugart. "Helicopter money: survey evidence on expectation formation and consumption behaviour." Oxford Economic Papers 73.1 (2021): 273-294.

Drescher, Katharina, Pirmin Fessler, and Peter Lindner. "Helicopter money in Europe: New evidence on the marginal propensity to consume across European households." Economics Letters 195 (2020): 109416.

Fagereng, Andreas, Martin B. Holm, and Gisle J. Natvik. "MPC Heterogeneity and Household Balance Sheets." American Economic Journal: Macroeconomics (2021)

Feldman, Naomi, and Ori Heffetz. A Grant to Every Citizen: Survey Evidence of the Impact of a Direct Government Payment in Israel. Working paper (2021).

Fuster, Andreas, Greg Kaplan, and Basit Zafar. "What Would You Do with $500? Spending Responses to Gains, Losses, News, and Loans." The Review of Economic Studies. (2020)

Galí, Jordi. "The effects of a money-financed fiscal stimulus." Journal of Monetary Economics 115 (2020): 1-19.

Harrison, Richard, and Ryland Thomas. "Monetary financing with interest-bearing money." Working paper (2019).

ING (2016), Helicopter Money 2016, an International Survey special report. https://www.ezonomics.com/ing_international_surveys/helicopter-money-2016/

Jappelli, Tullio, and Luigi Pistaferri. "Fiscal policy and MPC heterogeneity." American Economic Journal: Macroeconomics6.4 (2014): 107-36.

Johnson, David S., Jonathan A. Parker, and Nicholas S. Souleles. "Household expenditure and the income tax rebates of 2001." American Economic Review 96.5 (2006): 1589-1610.

Kueng, Lorenz. "Excess sensitivity of high-income consumers." The Quarterly Journal of Economics 133.4 (2018): 1693-1751.

Masciandaro, Donato. "COVID-19 Helicopter Money, Monetary Policy, and Central Bank Independence." Working paper (2020).

Michaillat, Pascal, and Emmanuel Saez. An economical business-cycle model." Working paper (2014).

Neri, Andrea, Concetta Rondinelli, and Filippo Scoccianti. "Household Spending Out of a Tax Rebate: Italian'€ 80 Tax Bonus'." Working paper (2017).

Parker, Jonathan A., et al. "Consumer spending and the economic stimulus payments of 2008." American Economic Review 103.6 (2013): 2530-53.

Renault, Thomas, and Baptiste Savatier, "What impact does helicopter money have on inflation?" French Council of Economic Analysis - Focus (2021)

Sahm, Claudia R., Matthew D. Shapiro, and Joel Slemrod. "Check in the mail or more in the paycheck: does the effectiveness of fiscal stimulus depend on how it is delivered?." American Economic Journal: Economic Policy 4.3 (2012): 216-50.

van Rooij, Maarten, and Jakob de Haan. "Will helicopter money be spent? New evidence." Working paper (2016).

Wolf, Christian K. "Interest Rate Cuts vs. Stimulus Payments: An Equivalence Result." Working paper (2021).

Woodford, Michael, and Yinxi Xie. "Fiscal and Monetary Stabilization Policy at the Zero Lower Bound: Consequences of Limited Foresight." Working paper (2020).