Law of Demand Delineation and Its Exceptions: The Case Study of Pakistan

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Abstract

The aim of this study is to study the law of demand and it's exceptions in Pakistan. Forensic method has been used to conduct the study by using data from 2008 to 2019. It shows that people are buying more and more vehicles by the passage of time. Demand of vehicles is increasing day by day. From this simpler explanation, we need to study the matter in deeper sense. It has been done with the help of further latest data up to the year 2022 related to vehicles. On the other hand, monthly sales of motor cars in Pakistan since February 2021 to January 2022 shows the most up to the date picture of the consumers towards the motor car purchase. It shows that due to various reasons, consumers demand more cars but with steeper fluctuations. We want to now the reasons behind this and found that the change in GDP per capita is responsible to the change in the behavior of the consumers towards motor car purchase. As per capita GDP increases, consumers increase the purchase of motor cars. So, the law of demand is clearly proven in Pakistan.

Introduction

The aim of this study is to search out the strength of the law of demand just in case of Pakistan. In fact, in an economy, the chief determinants of the market conditions are the factors of demand and supply. Within the conditions of competitive markets, the firms are facing disequilibrium as long as demand and supply are not in equal state. This example is named equilibrium. Some specific exceptions to the Law of Demand exist, that we'll attempt to explore currently just in case Pakistan. In economic science, the Law of Demand has been found true for many cases.

However, some vital exceptions are found many times. As an example, albeit the worth for Cigarettes rises up, its demand will not decrease. The exceptions to the law of demand precisely suit the Giffen product, Veblen and essential product.

The Law of Demand states that once the worth of a product will increase, its demand decreases. This relationship exists within the universe solely and as long as we have a tendency to keep all different factors constant. Suppose that an emptor might get a dozen fruits at Rs.40. If the worth rises up to Rs.45, he would limit the acquisition to a dozen. During this approach, the law of Demand in economic science shows a negative relationship between the worth and amount of a selected product or service out there within the market. Currently the question is what the exceptions to the Law of Demand are.

The theory of Veblen product relates to the class of exceptions to the Law of Demand. Veblen, an Economist who was included in a UN agency, highlighted this idea. Veblen product are those whose demand will increase with the rise in their costs. They become additional valuable once their value rises up. These are the products that people bear in mind to be additional valuable or helpful with a rise in their value. As an example, sort of a expensive gold jewelry, it's additional fascinating to the client than the one with lower prices. A mobile phone model with a high value has additional demand within the market. These examples and insights justify exceptions to the law of demand very clearly.

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Veblen's conception suits the simplest within the case of most well liked celebrities as a result of they're absolute to select a high variety of cosmetics or jewelry to take care of their standing. So, it's the overall exception to the Law of Demand.
The issue of value modification within the market is another exception to the Law of Demand. There can be a state of affairs once the worth of a product or service will increase and is subjected to future growth. So, the purchasers might purchase additional of it to avoid any price increment. Eventually, there are times once the worth of a product is near to decrease. Shoppers might briefly stop the acquisition to avail of the longer term advantages of value decrement. Recently, there has been a huge rise within the value of onions. People were shopping its additional quantity because of the concern of the any increase.
Let us perceive what the exceptions to the Law of Demand within the case of necessary things are. The Demand for essential product stays intact albeit there's a value rise. People are unable to stop buying the product of standard requirements. As an example, if the value of salt will increase, shoppers will not be able to stop it. It's the entire opposite of the law of Demand in economic science.
A significant exception to the law is the demand for luxury product. In such cases, albeit the worth will increase, the buyer will not stop consumption. Cigarettes and alcohol can be considered in this class.
The change in income of a consumer or a family also affects the demand for a particular product. If a family's income increases, they may decide to buy the product in more quantity, no matter what is the price. Again, if the family's income or a consumer's income decreases, they can select to reduce product consumption to some extent. It opposes the law of demand.

Review of Literature

Variants of the surplus sensitivity tests distinguish between positive and negative expected financial gain changes, associate degree approach initial projected by Shea (1995). He noted that totally different (completely different) consumption models imply different response of consumption to expected financial gain will increase and declines. Underneath shortsightedness, consumption tracks financial gain, and consumption ought to respond equally to certain financial gain will increase and reduces. Within the presence of credit constraints, however, households will save once financial gain is predicted to fall, however cannot borrow once financial gain is predicted to rise. so with credit constraints consumption ought to be a lot of powerfully related to with certain financial gain will increase than declines. In his empirical application Shea (1995) isolates households within the PSID whose heads may be matched to explicit long union contracts, and constructs a household-specific live of expected wage growth. He finds that consumption responds a lot of powerfully to certain financial gain declines than to certain financial gain will increase, associate degree spatial property that is inconsistent with each liquidity constraints and shortsightedness. Garcia, Lusardi and weight unit (1997) use a applied mathematics approach to differentiate between positive and negative expected financial gain growth. They predict the chance of being liquidity forced employing a change regression framework, and notice that liquidity forced shoppers square measure to a fault sensitive to past info (but free shoppers conjointly exhibit behavior that's inconsistent with the theory).Jappelli associate degreed Pistaferri (2000) use subjective quantitative financial gain expectations out there for a sample of Italian households as an instrument for financial gain growth and notice no proof for excess sensitivity to each financial gain will increase and declines.
Wilcox (1989) examined the response of combination consumption to Pre-announced Social Security advantages will increase. He found that consumption will increase not once the financial gain increase is proclaimed, however once it's really enforced. Specially, he calculable that one0|a ten} % increase in Social Security advantages induces a 1 % increase in retail sales

within the same month, and a three % increase in durables purchase. The limitation of this explicit check is that it's troublesome to research major changes in tax program mistreatment combination information on elements of retail sales. in an exceedingly series of papers Shapiro and Slemrod (1995, 2003, 2009) use instant-survey information to live individual responses to actual or hypothetic tax policies. For instance, in their paper in 1995, they have examined the effectiveness of President Bush's temporary reduction in withholding taxation that in 1992.

One month after the implementation of the tax amendment, they surveyed concerning five hundred taxpayers and asked them:

(a) Whether or not they had completed that taxation withholding had weakened,

And

(b) What they were getting to do with the additional cash in their payroll check, i.e., principally put it aside or principally pay it. Shapiro and Slemrod found that forty % of individuals interviewed planned to pay the additional remuneration, suggesting that even a brief tax amendment might be moderately effective in increasing house disbursal. Their analysis of the 2001 taxation rebate reports a lower estimate of the marginal propensity to consume (only twenty two % of the interviewed households rumored getting to pay the tax rebate), and small proof of short sightedness or liquidity constraints. Their analysis of the 2008 tax input reaches similar conclusions. a drag of those studies, common to any or all analysis mistreatment subjective responses or expectations, is that respondents could have very little incentives to answer the queries properly, could have bother understanding the phrasing of the queries, or could in apply behave otherwise from their rumored behavior.

Other studies have used actual consumption information to check temporary tax changes that increase income. Parker (1999) considers the result on consumption of the anticipated financial gain increase elicited by reaching the Social Security payroll cap ($106,800 in 2009) at some purpose throughout the yr.10 Souleles (1999) studies the anticipated financial gain increase elicited by the receipt of tax refunds, and in an exceedingly resulting paper analyzes however consumption suffered the wide pre-announced tax cuts of the executive era (Souleles, 2002). All of those studies use information from the CEX, all notice proof of excess sensitivity, and most of them don't attribute the failure of the speculation to liquidity constraints.

In Parker's study, a one greenback anticipated rise in financial gain will increase unserviceable consumption by concerning twenty cents. This result's unlikely to ensue to liquidity constraints, as a result of the sample includes solely high-income taxpayers. Souleles (1999) finds that ten % of federal tax refunds square measure spent on non-durables, however that the response of total consumption is far larger, or sixty five % of refunds, suggesting that almost all of the refund is spent on durables. Since high wealth people square measure those principally mistreatment the tax refund to pay on durable goods, he concludes that borrowing constraints will justify solely a part of the results.11 Souleles (2002) conjointly points out that liquidity constraints square measure unlikely to elucidate his excess sensitivity finding. more insights from tax refunds is provided by Johnson, Parker and Souleles (2006), United Nations agency study the massive taxation rebate program provided by the economic process and Tax Relief Reconciliation Act of 2001. The program sent tax rebates, usually $300 or $600 in price, to concerning common fraction of U.S. households. in line with the permanent financial gain hypothesis one rebate would have very little result on disbursal. Further, the speculation predicts that, within the absence of liquidity constraints, disbursal ought to increase as presently as shoppers begin to expect some tax cut, and not increase solely when they really have received the rebate check. Johnson, Parker, and Souleles' analysis uses a novel feature of the rebate program. As a result of it had been administratively troublesome to print and mail the rebate checks all directly, they were armored out over a ten-week amount from late July to the top of Sept 2001. most significantly, the actual week within which a check was armored trusted the second-to-last digit of the taxpayer's Social Security range, variety that's effectively at random appointed (the temporal arrangement of receipt of the tax rebate was determined in their CEX information because of the addition of a special survey module). This organisation permits the authors to spot the causative result of the rebate by examination the disbursal of households that received the rebate earlier to the disbursal of households that received it later. The authors notice that the common house spent 20-40 % of its 2001 tax rebate on non-durable merchandise throughout the three-month amount within which the rebate was received. The authors conjointly notice that the expenditure responses square measure largest for households with comparatively low liquid wealth and low financial gain, that is according to liquidity constraints. in an exceedingly connected paper, Agarwal, Liu and Souleles (2007) use a panel information set of mastercard accounts to research however shoppers suffered identical tax rebate analyzed by Johnson, Parker and Souleles (2006). They estimate the month-by-month response of mastercard payments, spending, and debt to the rebates, exploiting the randomised temporal arrangement of the rebates' disbursement to spot their causative effects. They found that, on average, shoppers at first saved a number of the rebate, by increasing their mastercard payments and thereby paying down debt and increasing their liquidity. However presently after their disbursal exaggerated, counter to the implications of the permanent financial gain model. A paper that stands in distinction to those is

Browning and Collado (2001), United Nations agency use Spanish small information to look at the patron response to the payment of institutionalized June and December additional wage payments to regular staff. Browning and Collado notice no proof of excess sensitivity, and argue that the rationale why earlier researchers found massive response of consumption to expected financial gain changes is as a result of finite rationality: shoppers tend to sleek consumption and follow the speculation once expected financial gain changes square measure massive, however square measure less seemingly to try to to thus once the changes square measure little and therefore the value of adjusting consumption don't seem to be trivial.12 Suppose {for example|for instance|as associate degree example} that buyers United Nations agency need to regulate their consumption upwards in response to an expected financial gain increase have to be compelled to face the price of negotiating a loan with a bank. It's seemingly that the utility loss from not adjusting absolutely to the new equilibrium is comparatively little once the expected financial gain increase is little, that suggests that no adjustment would present itself if the group action value related to negotiating a loan is high enough.13 This "magnitude hypothesis" has been formally tested by Scholnick et al (2009), United Nations agency use an outsized information set provided by a Canadian bank that features info on each credit cards disbursal moreover as mortgage payment records. As in Stephens (2008) he argues that the ultimate mortgage payment represent associate degree expected income shock (that is, financial gain web of pre committed debt service payments). His check of the magnitude hypothesis appearance at whether or not the response of consumption to expected financial gain will increase depends on the relative quantity of mortgage payments. Overall, the most limitation of the approach mentioned during this section is that it offers very little steerage for the way shoppers would react to completely different shocks and environments. However, it will provide ways that to guage why consumption theories fail. for example, a number of the studies examined found that low-wealth shoppers react a lot of to certain financial gain changes than high-wealth shoppers, a finding that points to the existence of liquidity constraints.

While discussing what the exceptions to the Law of Demand are, Giffen goods are the first factor to consider. Sir Robert Giffen is the pioneer in introducing Giffen goods in Economics. These products are inferior to that regular or luxury purchases. As the Price of Giffen goods increases, so is their Demand. This significant feature makes these goods unique. Notably, all Giffen goods are inferior goods, but all inferior products aren't Giffen. Suppose there is a rise in the price range of meat or fish. To continue its daily consumption, the family may cut down the costs and thrive on bread.

Data Analysis

We get forensic information about demand pattern of the people of Pakistan. Figure 1 is based on the data of 2008 to 2019. It shows that people are buying more and more vehicles by the passage of time. Demand of vehicles is increasing day by day.

From this simpler explanation, we need to study the matter in deeper sense. It has been done with the help of further latest data up to the year 2022 related to vehicles.

Figure: 1

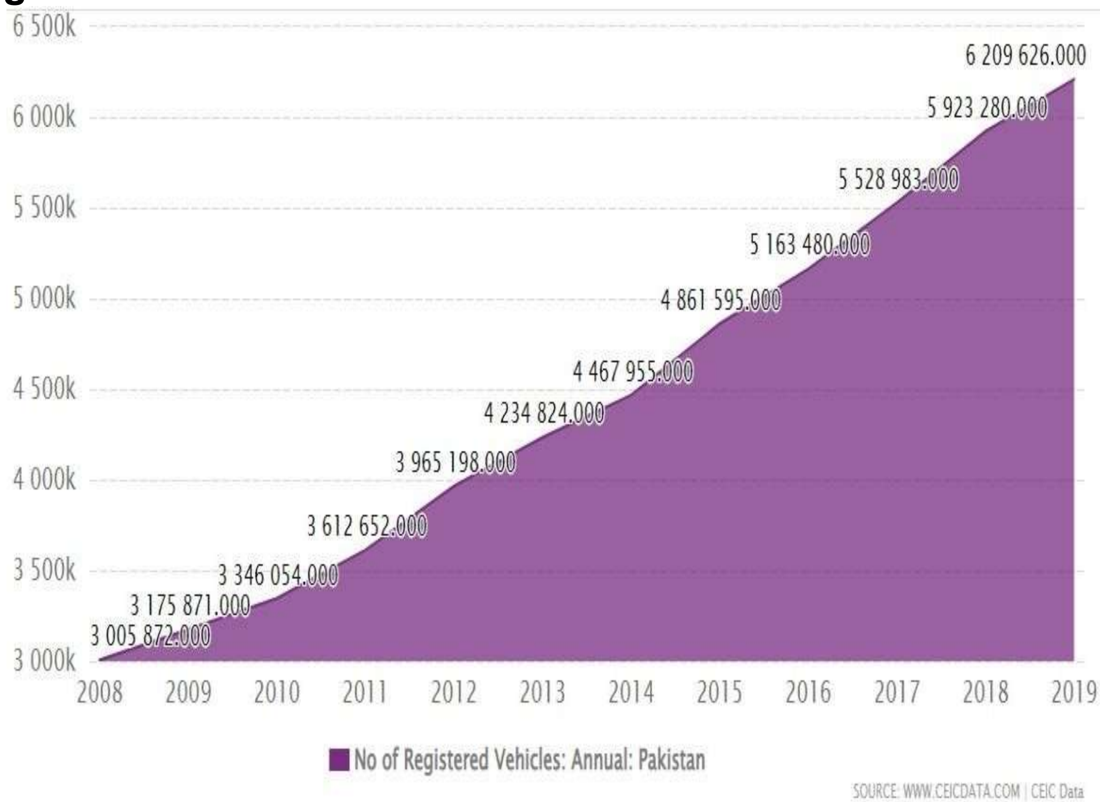


Figure 2 shows monthly sales of motor cars in Pakistan since February 2021 to January 2022. It shows the most up to the date picture of the consumers towards the motor car purchase. It shows that due to various reasons, consumers demand more cars but with steeper fluctuations. We want to now the reasons behind this. For this purpose, we can see figure 3 constructed with the help of the data from the year 2010 to 2020.

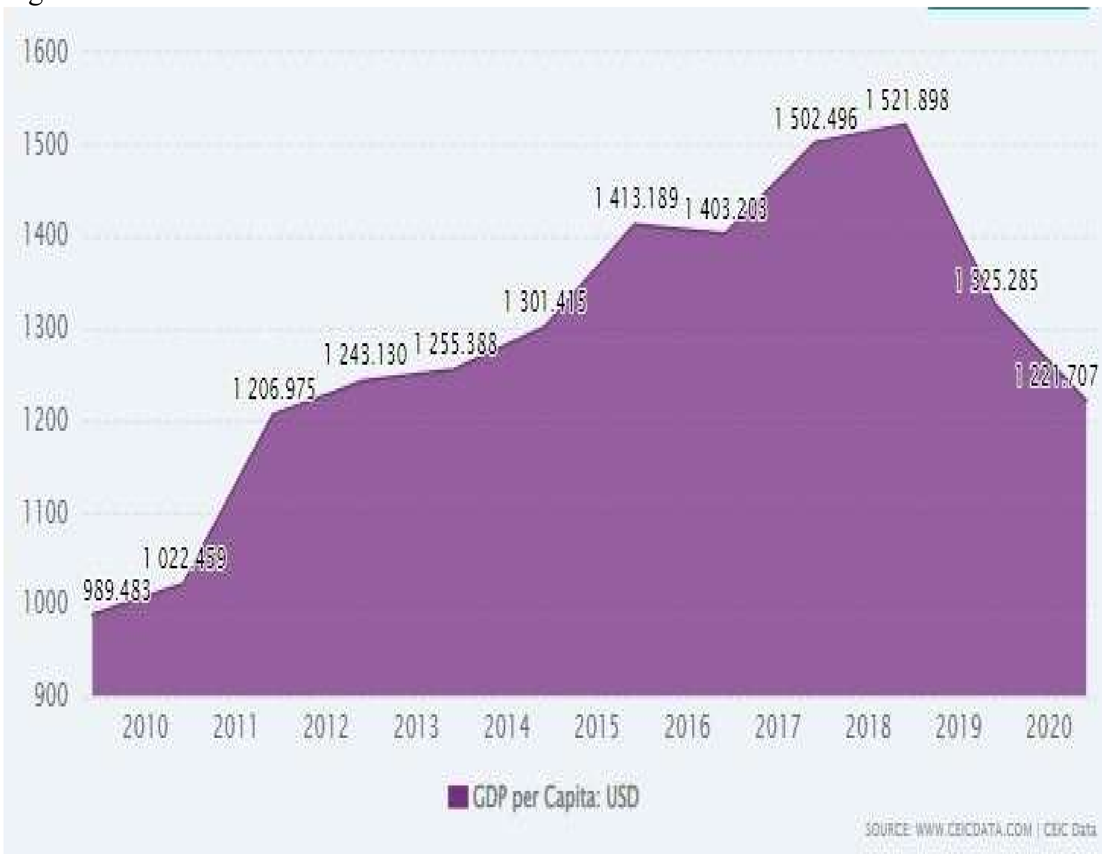
Figure: 2

Figure 3 explains quarterly sales variation in car sales. **Figure: 3**

Pakistan quarterly sales variation

Figure 4 shows that the change in gdp per capita is responsible to the change in the behavior of the consumers towards motor car purchase. As per capita gdp increases, consumers increase the purchase of motor cars. So, the law of demand is clearly proven in Pakistan.

Figure: 4



Conclusion

This study proves the law of demand in case of Pakistan. But it is further recommended that more studies should be conducted to explain the behavior of common people in Pakistan towards luxurious goods especially during the normal economic conditions because this study consists of a period absolutely under the impact of Covid-19. This study doesn't provide solid explanation regarding economic fluctuations during various periods. So, these drawbacks should be kept in mind in future studies.

References

- Agarwal L, Souleles NS. 2007. The Reaction of Consumer Spending and Debt to Tax Rebates - Evidence from Consumer Credit Data. J. Polit. Econ.115:986-1019
- Aguiar M, Hurst E. 2005. Consumption versus Expenditures. J. Polit. Econ. 113: 919-48
- Aguiar M, Hurst E. 2007. Life-Cycle Prices and Production. Am. Econ. Rev. 97: 1533-59
- Altonji JG, Siow A. 1987. Testing the Response of Consumption to Income with (Noisy) Panel Data. Q. J. Econ. 102:293-328.
- Angeletos GM, Laibson D, Repetto A, Tobacman J, Weinberg S. 2001. The Hyperbolic Consumption Model: Calibration, Simulation, and Empirical Evaluation. J. Ec. Persp. 15(3):47-68.
- Attanasio OP. 2000. Consumption. In Handbook of Macroeconomics. Vol. 1B, ed. JB. Taylor, M Woodford, 11: 741-812.

- Amsterdam: Elsevier Science Attanasio OP, Goldberg PK, Kyriazidou E.2008. Credit Constraints in the Market for Consumer Durables: Evidence from Micro Data on Car Loans. Int. Econ. Rev. 49(2): 401-436.
- Attanasio OP, Meghir C, Aguila E. 2008. Changes in Consumption at Retirement. RAND Working Paper WR-621.
- Attanasio OP, Pavoni N. 2007. Risk Sharing in Private Information Models with Asset Accumulation: Explaining the Excess Smoothness of Consumption. NBER Working Papers 12994.
- Attanasio OP, Weber G. 1993. Consumption Growth, the Interest Rate, and Aggregation. Rev Econ. Stud. 60:631-49.
- Blundell R, Low H, Preston I. 2008. Decomposing Changes in Income Risk Using Consumption Data. IFS Working Papers W08/13. London: Institute for Fiscal Studies.
- Blundell R, Pistaferri L, Preston I. 2008. Consumption inequality and partial insurance. Am. Econ. Rev. 98:1887-1921.
- Bodkin R. 1959. Windfall Income and Consumption. Am. Econ. Rev. 49:602-14.
- Browning M, Collado MF. 2001. The Response of Expenditures to Anticipated Income Changes: Panel Data Estimates. Am. Econ. Rev. 91:681-692.
- Browning M, Crossley TF. 2001. The Life-Cycle Model of Consumption and Savings. J. Econ. Persp. 15(3): 3-22.
- Browning M, Crossley TF. 2001. Unemployment insurance benefit levels and consumption changes. J. Public Econ. 80(1):1-23.
- Camerer C, Loewenstein G, Prelec D. 2005. Neuroeconomics: How Neuroscience Can Inform Economics. J. Ec. Lit. 43(1): 9-64
- Campbell JY. 1987. Does Saving Anticipate Declining Labor Income? Alternative Test of the Permanent Income Hypothesis. Econometrica 55:1249-73
- Card D, Di Nardo JE. 2002. Skill-Biased Technological Change and Rising Wage Inequality: Some Problems and Puzzles. J. Labor Econ. 20(4):733-783
- Carroll CD. 1992. Buffer-stock Saving and the Life-Cycle/Permanent Income Hypothesis. Q. J. Econ. 112:1-56.
- Carroll CD. 2001. Precautionary Saving and the Marginal Propensity to Consume Out of Permanent Income. NBER Working Paper 8233
- Chamberlain G. 1984. Panel data. In Handbook of Econometrics, vol. 2 ed. Z Griliches, MD. Intriligator, 22: 1247–1313.
- Amsterdam: Elsevier Science Deaton AS. 1992. Understanding Consumption. Oxford: Oxford University Press.
- Flavin M. 1981. The Adjustment of Consumption to Changing Expectations about Future Income. J. Polit. Econ. 89:974-1009.
- Friedman M. 1957. A Theory of the Consumption Function. Princeton:Princeton University Press.
- Garcia R, Lusardi A, Ng S. 1997. Excess Sensitivity and Asymmetries in Consumption: An Empirical Investigation. J. Money Credit Bank. 29(2):154-176.
- Gertler P, Gruber J. 2002. Insuring Consumption Against Illness. Am. Econ. Rev. 92(1):51-70.
- Gruber J. 1997. The Consumption Smoothing Benefits of Unemployment Insurance. Am. Econ. Rev. 87(1):192-205
- Guvenen F, Smith A. 2009. Inferring Labor Income Risk from Economic Choices: An Indirect Inference Approach. Mimeo. University of Minnesota.
- Haider SJ, Stephens Jr. M, .2007. Is There a Retirement-Consumption Puzzle? Evidence Using Subjective Retirement Expectations. Rev. Econ. Stat. 89:246-64.

- Hall RE. 1978. Stochastic Implications of the Life-Cycle Permanent Income Hypothesis: Theory and Evidence. J. Polit. Econ. 86:971-87 Hall RE.
- Hayashi F. 1985. The Permanent Income Hypothesis and Consumption Durability: Analysis Based on Japanese Panel Data. Q. J. Econ. 100:1083-113.
- Heathcote J, Storesletten K, Violante GL. 2009. Quantitative Macroeconomics for Heterogeneous Households. Annual Review of Economics (forthcoming)
- Hsieh CT. 2003. Do Consumers React to Anticipated
- Income Shocks? Evidence from the Alaska Permanent Fund. Am. Econ. Rev. 93:397-405.
- Mubbard GR, Skinner J, Zeldes SP. 1995. Precautionary Saving and Social Insurance.
- J, Blundell R, Tanner S. 1998. Is There a Retirement Savings-Puzzle?. Am. Econ. Rev. 88: 769-88.
- Johnson DS, Parker JA, Souleles NS. 2006. Household Expenditure and the Income Tax Rebates of 2001. Am. Econ. Rev. 96: 1589-1610.
- Kaplan G, Violante GL. 2009. How Much Insurance in Bewley Models?. Mimeo. New York University.
- Kaufmann K, Pistaferri L. 2009. Disentangling Insurance and Information in Intertemporal Consumption Choices. Am. Econ. Rev. Papers and Proceedings 99(2):387-92.
- K. Kurihara. New Brunswick: Rutgers University Press Parker JA. 1999. The Reaction of Household Consumption to Predictable Changes in Social Security Taxes. Am. Econ. Rev. 89:959-7.
- Laibson D. 1997. Golden Eggs and Hyperbolic Discounting. Q. J. Econ. 112:443-77.
- Low H, Meghir C, Pistaferri L. 2009. Wage Risk and Employment Risk over the Life Cycle. Am. Econ. Rev. (forthcoming).
- Maki DM, Palumbo MG. 2001. Disentangling the Wealth Effect: A Cohort Analysis of Household Saving in the 1990s. Finance and Economics Discussion Series 2001-21. Washington: Board of Governors of the Federal Reserve System.
- Manski CF. 2004. Measuring Expectations. Econometrica 72:1329-76