

The Role of Payment Characteristics in Consumer Payment Choice

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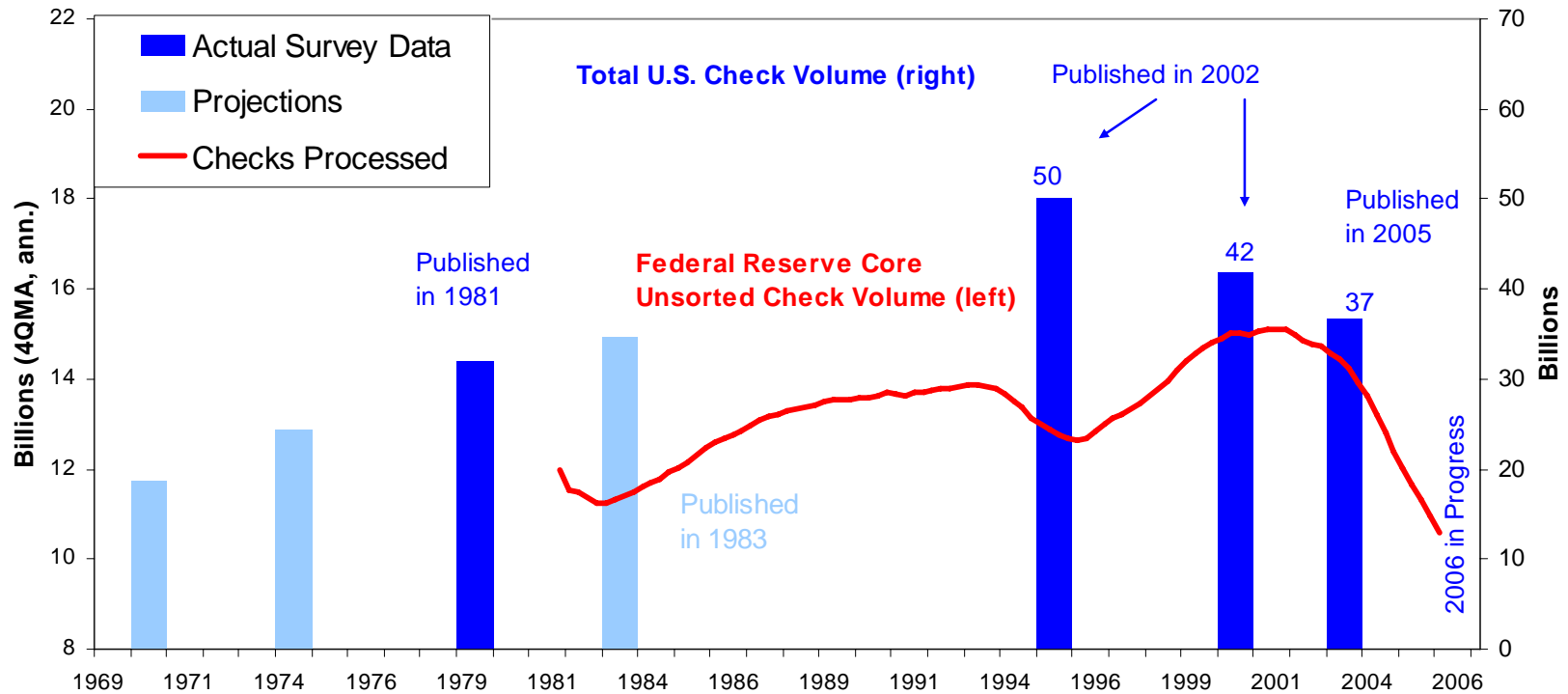
REVISED: May 23, 2007

Overview

- Paper-to-electronics – the 5 Ws?
- Consumer payments research
- Demographics & payment demand
- Role of payment characteristics in demand
- Implications and public policy issues

Paper Checks – Public View

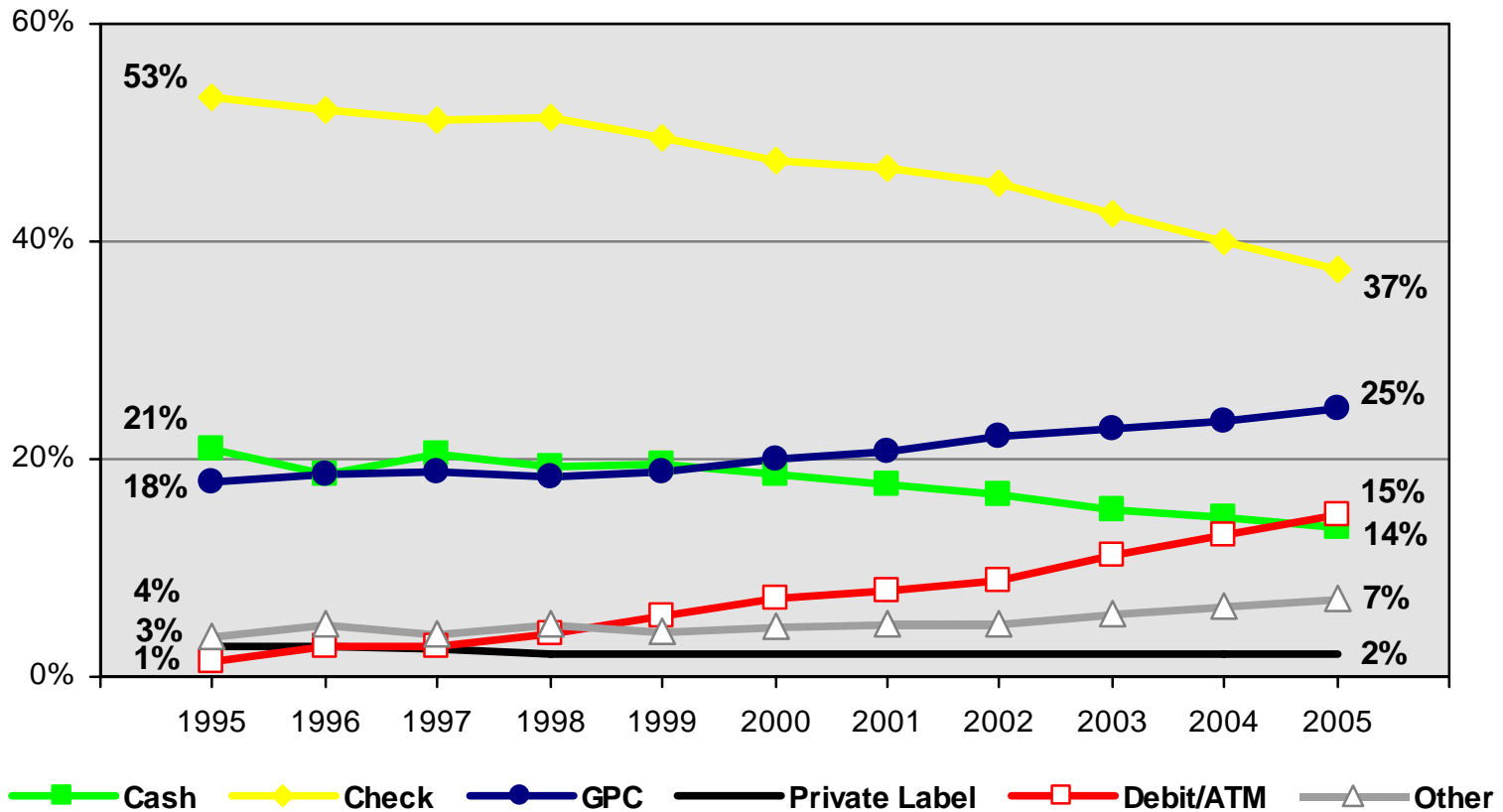
Check Volume Estimates



SOURCE: Benton, Blair, Crowe, and Schuh. (2007) “The Boston Fed Study of Consumer Behavior and Payment Choice: A Survey of Federal Reserve System Employees.” Federal Reserve Bank of Boston Public Policy Discussion Paper #07-1.

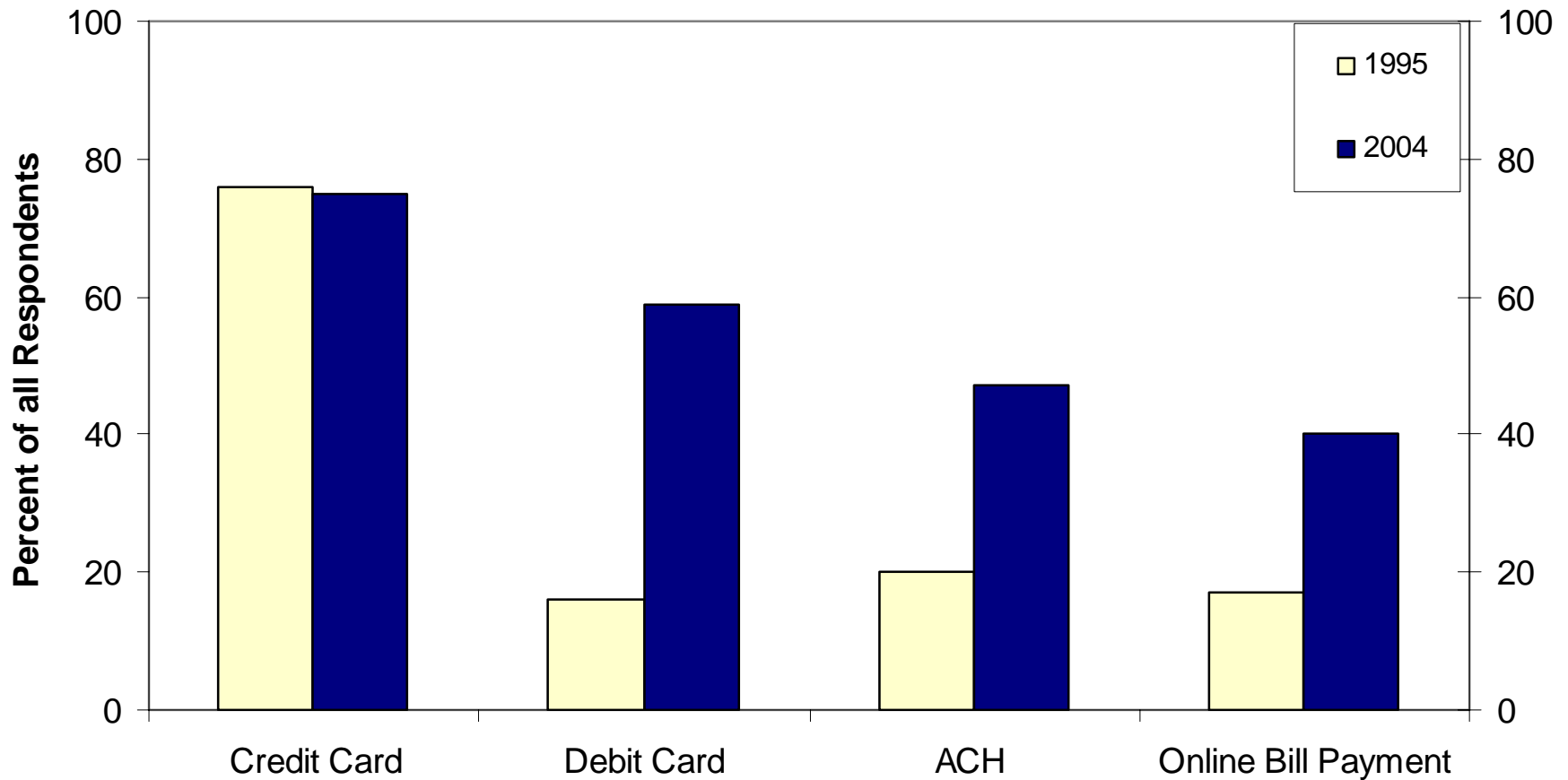
Paper Checks – Private View

Payment Method Share of Total Dollar Volume (All Merchant Categories)



Shift to Electronics

Consumers are adopting electronic payment methods in place of checks



Consumer Payments Research

- Philadelphia Fed bibliography
 - 95% on supply side (firms, banks, networks, etc.)
 - 5% on demand side (consumers)
- Boston Fed efforts*
 - Data development program begins (2003)
 - Conferences (2005, 2006, 2008) and Forums (2007)
 - Public Policy Discussion Papers (Benton et al 2007)
 - Industry Briefs (Becker 2007)

Consumer Payments Data

Source	Examples	Comments
Public	<ul style="list-style-type: none">● Payments Studies (Fed)● SCF (Fed)● Household diary (USPS)● PSID and NLS panels● Health and Retirement Survey	Relatively few, infrequent or short samples, delayed availability, restricted respondent pools, limited payments variables
Private	<ul style="list-style-type: none">● Visa Payments Panel/TNS● STAR Usage Study● ABA/Dove● Many other firms w/data● Commercial banks	Many options, most are proprietary or expensive (or both), hard for outsiders to verify statistical integrity and representation

Boston Fed Data Program

Consumer payments surveys:

500 Boston Fed employees (2003)

5,000 Federal Reserve employees (2004)

1,500 U.S. consumers/AARP (2006)

1,500 U.S. consumers/RAND Corp (2007-08)

Payment Demand Models

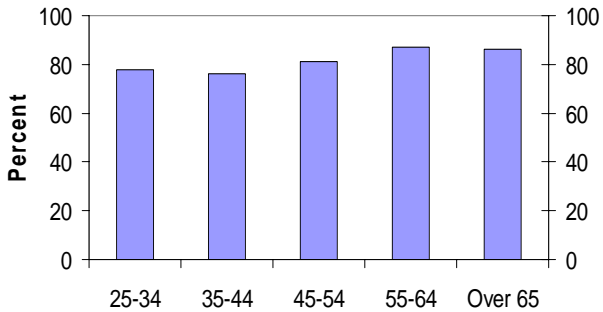
- Existing models primarily depend on demographic variables
 - Age, gender, education, race
 - Income, wealth treated as “demographics”
- New model includes payment characteristics
 - Fundamental features of payment methods
 - E.g., cost of using payment

SOURCE: Schuh and Stavins. (2006) “To Check or Not to Check: Why Are (Some) Consumers (Finally) Writing Fewer Checks?” Unpublished working paper.

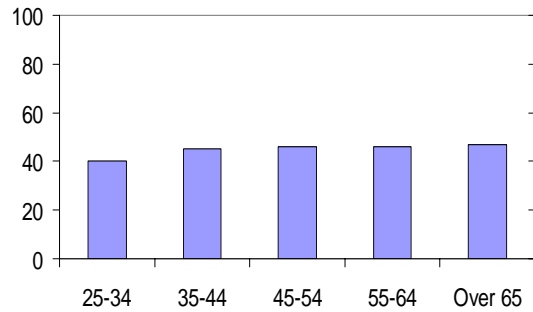
Adoption by Age

Decreasing in age

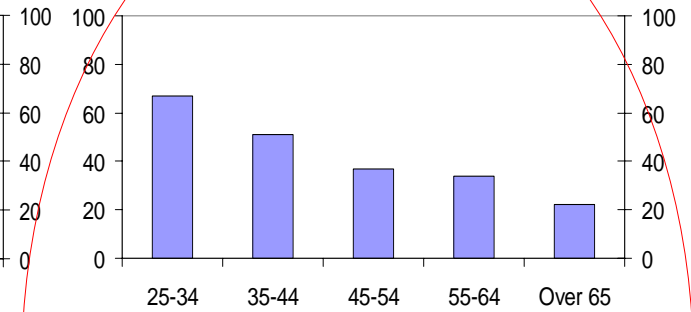
Checks



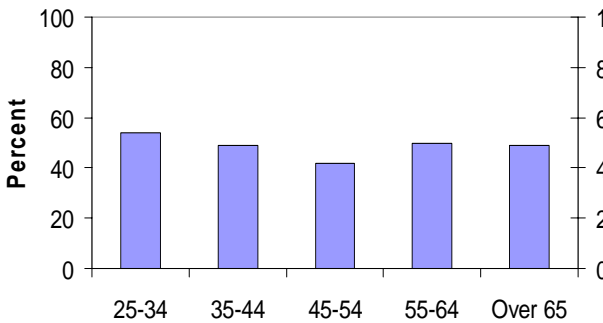
Credit Cards



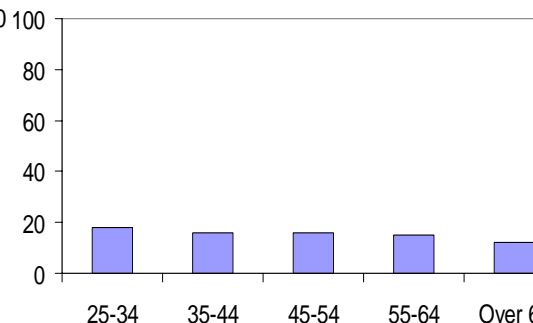
Debit Cards



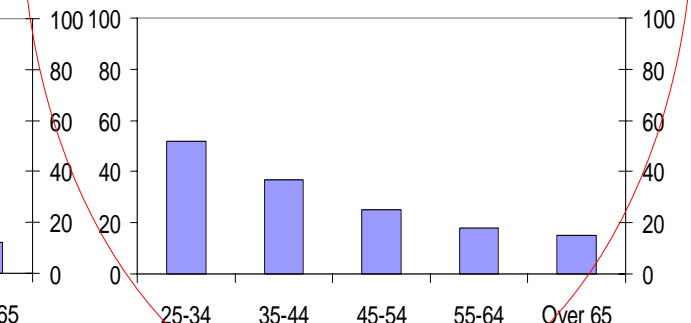
ACH



SVC



Online Banking

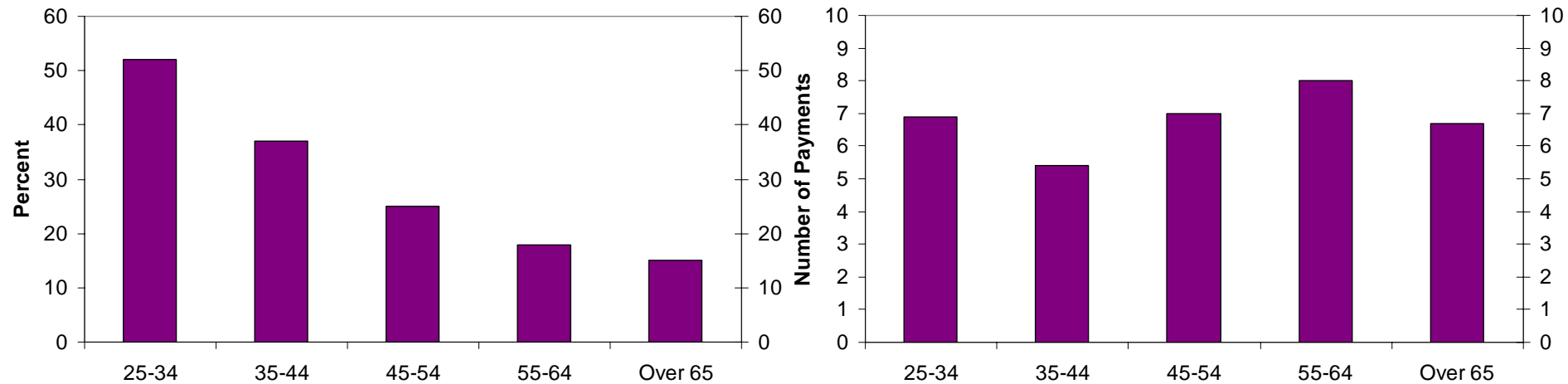


Online Banking

The correlation between age and payment choice is quite different between adoption and use

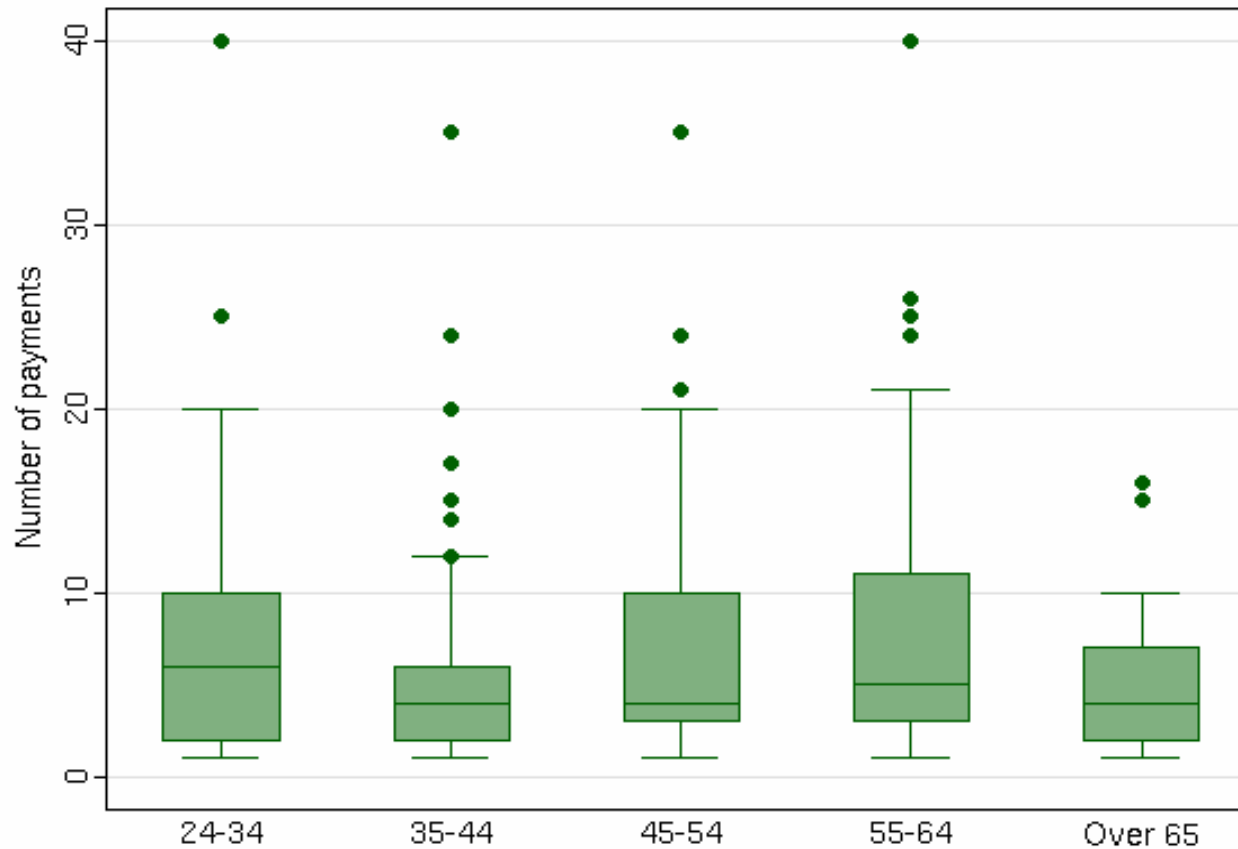
Adoption

Use (by Adopters)

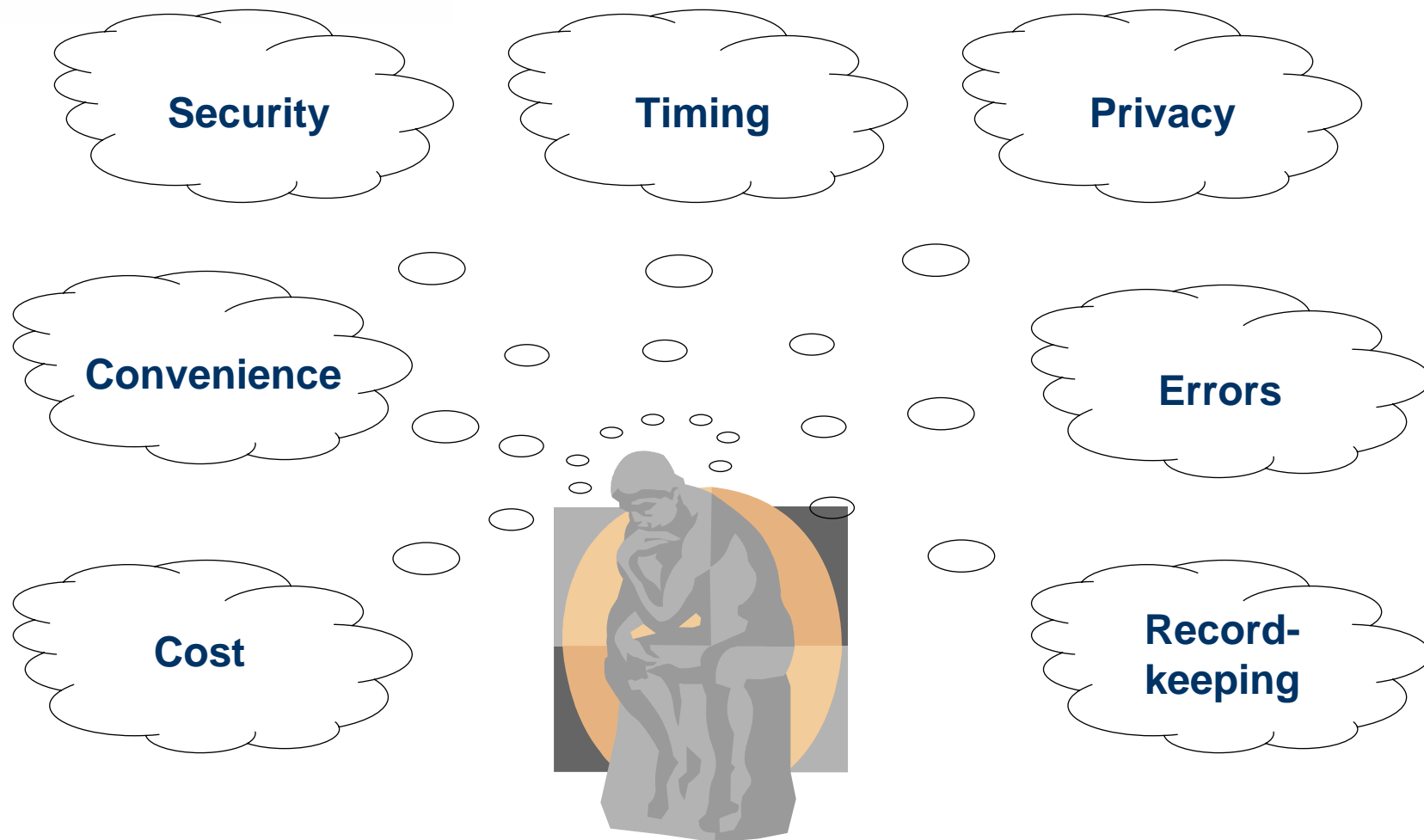


Online Banking

Use is similar across ages but varies widely within ages



Payment Characteristics



The Consumer's Payment Choice

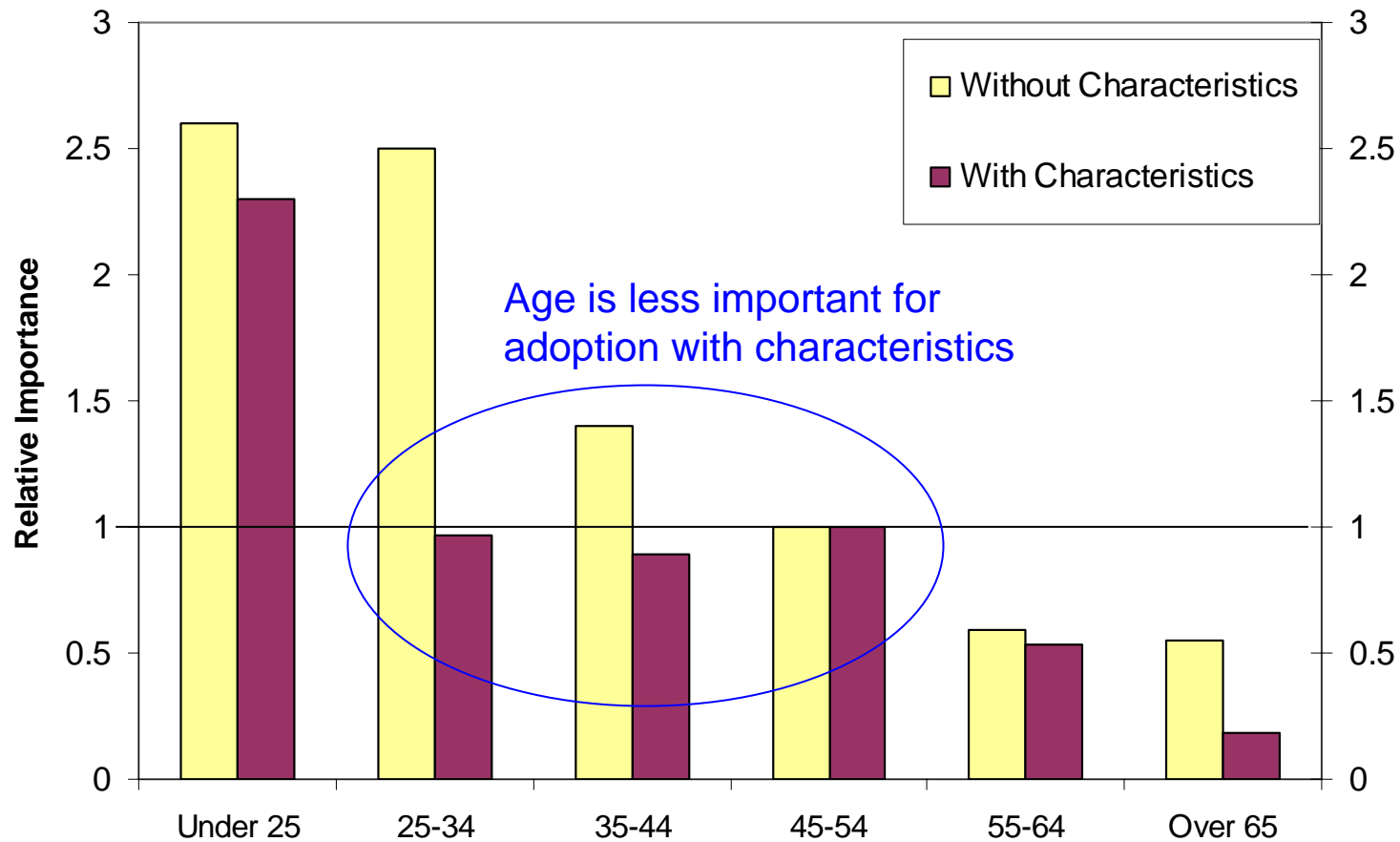
Impact of Characteristics

Payment characteristics reduce the significance of demographics

	Significance in Econometric Model of Adoption							
	Without Characteristics				With Characteristics			
	Credit Card	Debit Card	ACH	Online Banking	Credit Card	Debit Card	ACH	Online Banking
Age	✓	✓	✓	✓	✓			
Education	✓	✓	✓	✓	✓			
Income	✓	✓	✓	✓				✓
Percent of Data Explained	12	5	4	5	31	37	43	37

Demographics & Characteristics

Assessments of payment characteristics reduce the impact of age on the adoption of online bill payment



Assessments of Characteristics

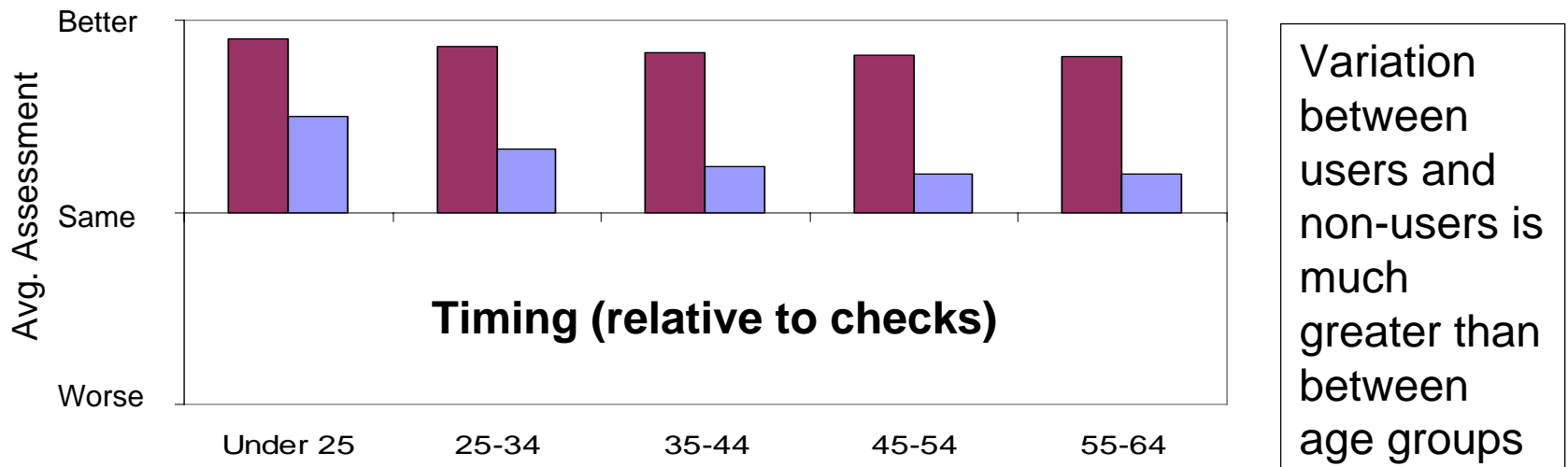
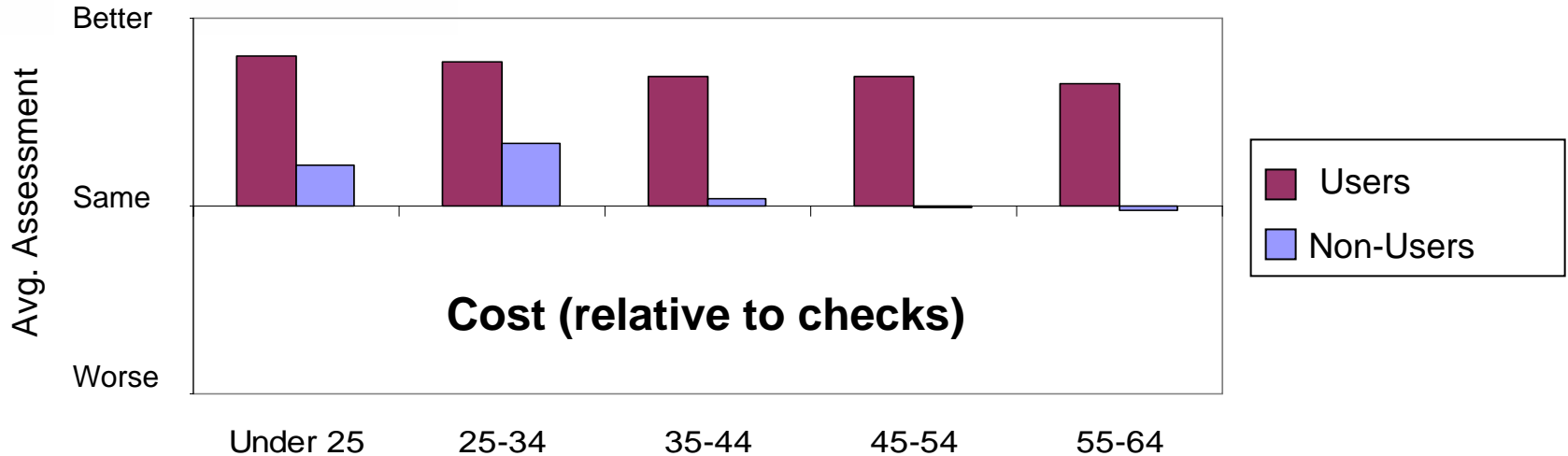
Assessments vary widely between users & non-users

Characteristic	Users					Non-Users				
	Credit Card	Debit Card	ACH	Stored-Value Card	Online Bill Pay	Credit Card	Debit Card	ACH	Stored-Value Card	Online Bill Pay
Cost		Light Green	Dark Green	Light Green	Dark Green	Red				
Convenience	Dark Green	Dark Green	Dark Green	Dark Green	Dark Green	Light Green	Light Green		Light Green	Light Green
Safety			Dark Green		Light Green	Red	Red			Red
Privacy			Light Green	Light Green		Red	Red		Light Green	Red
Errors	Light Green	Light Green	Light Green	Light Green	Light Green					
Timing	Dark Green	Light Green	Dark Green	Light Green	Dark Green	Light Green			Light Green	Light Green
Record keeping	Light Green	Light Green	Light Green		Light Green		Red			

Much Worse
 Worse
 Same
 Better
 Much Better

(Relative to paper checks)

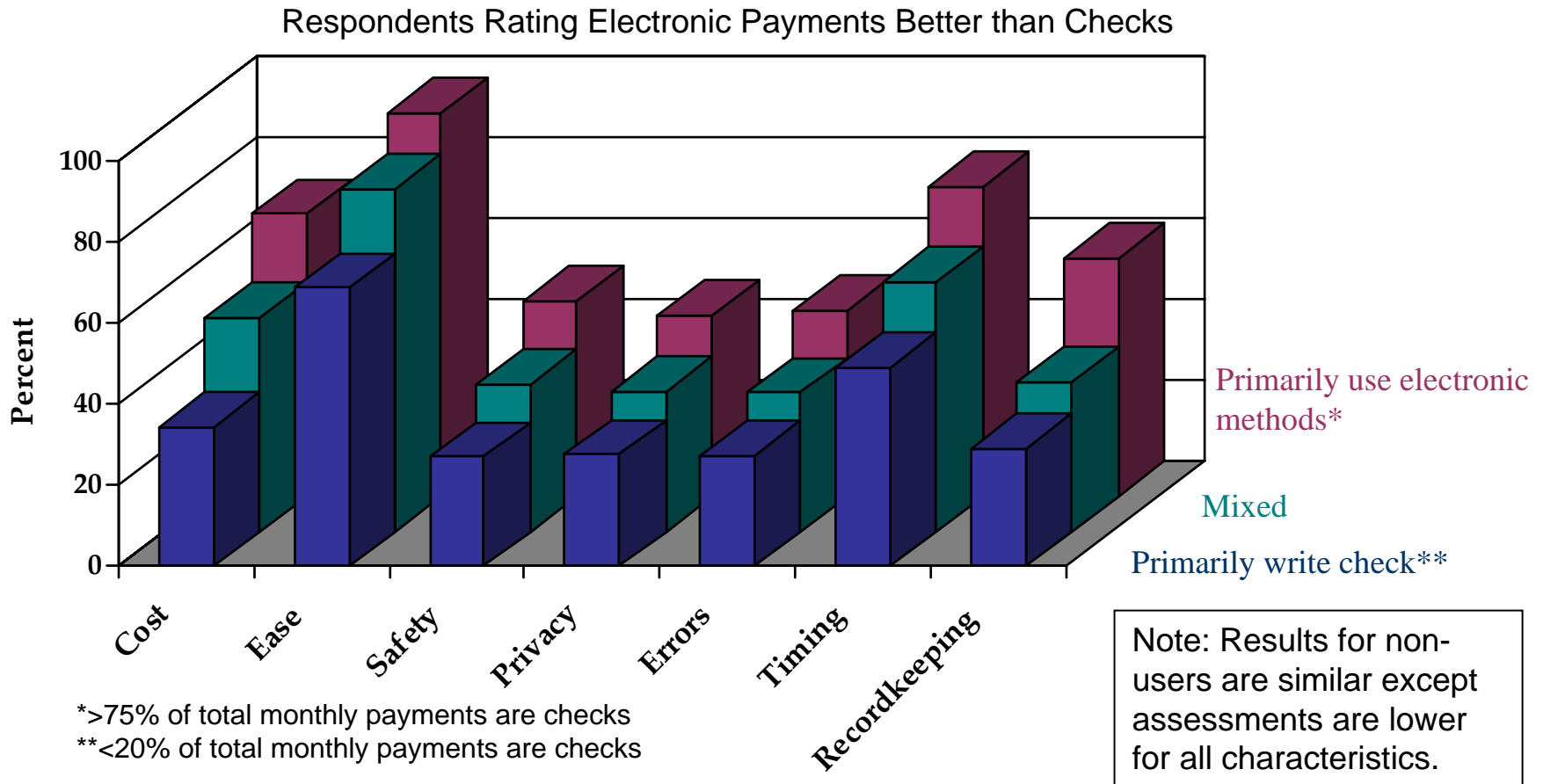
Online Bill Payment Characteristics



Variation between users and non-users is much greater than between age groups

Characteristics & Payment Choice

Consumers use payment methods that are consistent with their assessments of payment characteristics



Conclusions

- Characteristics are more important than demographics in consumer payment decisions
- Consumer payment decisions appear to be consistent with their assessments of characteristics
- But how (and how well) do consumers form their assessments of payment characteristics?
- More/better data and research are needed...
- Answers will shape development of payment system and public policies