

A Comparative Study of Mobile Wallet Adoption in India and Italy

Suhas Dharwad

Department of Psychology and Cognitive Sciences

MSc Human Computer Interaction

University of Trento

suhas.dharwad@studenti.unitn.it

1. Introduction

Mobile wallets like Google Pay, Apple Pay, PayPal, and other platforms have revolutionized how people make payments both in-person and online. With a single tap of the phone or scan of a QR code, users can make payments while buying groceries, purchasing tickets, and paying bills. This eliminates the hassle of getting out debit/credit cards or counting currency notes. On top of this, transactions are completed in seconds and are also saved in the transaction history, making it easy to keep track of spending. The transformative impact of digital technology on the financial landscape, particularly through mobile wallets, has been widely acknowledged (Bhardwaj & Kapoor, 2024).

However, the adaptation of mobile wallets varies significantly across countries. Different factors such as trust in payment platforms, banking and governmental regulations, and cultural preferences play an important role in this varying adoption rate (Bhardwaj & Kapoor, 2024; ResearchGate, n.d.-b).

The current study aims to understand the reasons for this difference in adoption between two distinct cultural and economic contexts: India and Italy.

2. Current Payment Landscape

2.1. India

In India, the mobile wallet landscape is dominated by the Unified Payments Interface (UPI). Launched in 2016, UPI has rapidly transformed digital payments by enabling instant real-time payments between bank accounts. This system is interoperable, allowing users to make payments through various apps like Google Pay, PhonePe, Paytm, and many others, all leveraging the underlying UPI infrastructure. The widespread adoption of QR codes has also made mobile payments ubiquitous, from large retail chains to small street vendors (IRJMETs, 2025). The Indian government's push for a cashless economy and financial inclusion, along with a large tech-savvy population, has significantly propelled the growth of mobile wallet usage. The convenience, security features, and low transaction costs associated with UPI have made it a preferred payment method for millions (JETIR.org, n.d.; ResearchGate, n.d.-a; IRJMETs, 2025). Studies have consistently

highlighted perceived usefulness, ease of use, and trust as key determinants of UPI adoption and usage in India (JETIR.org, n.d.; ResearchGate, n.d.-a).

2.2. Italy

In Italy, while mobile wallets like Apple Pay and Google Pay are available, their adoption has been slower compared to countries like India. Card payments (credit and debit cards) remain the most prevalent form of cashless transactions. There is a strong cultural preference for traditional payment methods, and cash is still widely used for everyday transactions, especially among older generations (ResearchGate, 2025). While QR code payments exist, they are not as pervasive as in India. Regulatory frameworks and banking infrastructure have historically favored card-based transactions. Efforts are being made to encourage digital payments, including initiatives to promote electronic payments and reduce the use of cash, but the shift is more gradual. Trust in new payment technologies and data privacy concerns also play a significant role in the pace of mobile wallet adoption in Italy (LPCPS E-Sarathi, 2024; ResearchGate, 2025). Research on barriers to mobile payment adoption in Italy highlights usage, risk, and tradition as significant impediments (ResearchGate, 2025).

3. Methodology

3.1 Research Design

To understand the reasons for adaptation and lack thereof with mobile wallets between India and Italy, this study employed a quantitative and qualitative questionnaire-based approach. The research design focused on identifying key factors influencing payment method preferences and mobile wallet adoption in these two distinct cultural and economic contexts. The questionnaire was structured to capture various facets of user interaction with payment systems, including their existing habits, perceptions, cognitive experiences, and socio-cultural influences.

Specifically, the questionnaire aimed to identify:

- **Demographic profiles** of participants from both India and Italy to allow for contextual analysis of payment preferences.
- **Most frequently used in-person payment methods** and the underlying reasons for these preferences, providing a baseline of current payment behaviors.
- **User perceptions and attitudes towards payment methods**, particularly mobile wallets, across several dimensions:
 - **System Usability (SUS)**, assessing the perceived ease of use and learnability of payment methods.
 - **Trust and Security**, evaluating confidence in the safety and privacy of personal and financial information within chosen payment methods.
 - **Cultural Orientation**, exploring the influence of tradition, familiarity, and social norms on payment method adoption.

- **Cognitive Load** experienced during payment transactions, utilizing a modified NASA TLX (Short) to quantify mental demand, frustration, and perceived performance.
- **Open-ended reflections** to gather qualitative insights into broader national influences on payment choices and potential motivators or barriers to switching payment methods.

The integration of quantitative scales (Likert scales for SUS, Trust, Cultural Orientation, and NASA TLX; multiple choice for demographics and preferred methods) with open-ended questions allowed for a comprehensive understanding of both measurable user experiences and nuanced contextual factors. This design facilitates a comparative analysis between India and Italy, correlating demographic variables, perceived usability, trust levels, cultural leanings, and cognitive demands with the reported adoption rates and preferences for mobile wallets.

3.2 Participants

A total of 59 participants completed the questionnaire. The participant pool was geographically distributed between the two countries under investigation, with 33 participants from Italy and 26 from India. The age distribution of the participants showed a strong representation from younger age groups, with 29 participants aged 18–24 years and 15 participants aged 25–34 years. Smaller numbers were observed in older age brackets, including 3 participants aged 35–44 years, 9 participants aged 45–54 years, 1 participant aged 55–64 years, and 1 participant aged 65+ years. One participant preferred not to disclose their age. In terms of gender identity, the sample comprised 36 men and 22 women, with one participant opting not to specify their gender. The educational background of the participants was predominantly higher education, with 34 participants holding an undergraduate degree and 18 participants holding a postgraduate degree. Four participants reported high school or less as their highest education level, while one held a doctorate or higher, and one indicated 'Other'. One participant preferred not to disclose their education level.

3.3 Procedure

The questionnaire was administered online using Google Forms, facilitating efficient data collection. Distribution of the survey was primarily conducted through various social channels, including Instagram and WhatsApp groups, to reach a broad and diverse participant pool in both India and Italy. Participants were informed that the questionnaire would take approximately 10 to 12 minutes to complete.

3.4 Measures/Instruments

The study utilized a comprehensive questionnaire comprising several distinct sections designed to capture various aspects of payment preferences and experiences.

Demographics: This section consisted of 4 custom multiple-choice questions aimed at gathering essential background information about the respondents. Questions inquired

about country of residence, age group, gender identity, and highest level of education completed. Responses were categorical and used for grouping and comparative analysis.

Preferred Payment Method: This section included 2 custom questions to identify participants' most frequently used in-person payment method. It featured one multiple-choice question (e.g., Cash, Card, Mobile Wallets) and one optional open-text question allowing respondents to elaborate on their preference. These responses were analyzed descriptively or qualitatively.

System Usability Scale (SUS): The System Usability Scale (SUS), a widely used and validated instrument, was employed to measure the perceived usability of the respondent's preferred payment method. It comprised 10 items rated on a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Standard SUS scoring procedures were applied: odd-numbered item scores were calculated as (response-1), even-numbered items as (5-response), and the total was then multiplied by 2.5 to yield a final score out of 100. The SUS is known for its good reliability, with Cronbach's alpha typically exceeding 0.85 (Brooke, 1996; PMC, n.d.). The questionnaire used the standard wording of the scale as developed by Brooke (1996).

Trust & Security: Perceived safety, privacy, and institutional confidence in the selected payment method were assessed using a Custom Trust & Security Scale. This scale consisted of 4 items rated on a 5-point Likert scale (1 = "Strongly Disagree" to 5 = "Strongly Agree"). Responses could be summed or averaged to produce a composite trust score. This was a custom-developed instrument, tailored to digital finance contexts, and its psychometric properties were not formally established. Literature suggests that authentication protocols and data security safeguards are fundamental components affecting the perception of security in mobile payment systems, and perceived usefulness and service provider reputation also influence trust (LPCPS E-Sarathi, 2024; MDPI, n.d.).

- **Cultural Orientation:** A Custom Cultural Orientation Scale was included to explore cultural attitudes towards traditional versus modern financial practices and the influence of peer behavior. This scale comprised 5 items also rated on a 5-point Likert scale (1 = "Strongly Disagree" to 5 = "Strongly Agree"). Items could be summed or averaged to generate an index reflecting traditionalism or technological conservatism. As a custom scale, its psychometric properties were not formally established. The influence of national culture on mobile payment acceptance has been recognized in academic literature, with factors like "pain of payment" and uncertainty avoidance playing a role (Euroasia Journal, 2025; ResearchGate, n.d.-b).

NASA Task Load Index (TLX) – Short Version: Subjective workload experienced while using the chosen payment method was measured using the NASA Task Load Index (TLX) – Short Version. This instrument assessed 6 dimensions: Mental Demand, Physical Demand, Temporal Demand, Effort, Performance (reverse-coded), and Frustration. Each dimension was rated on an 11-point slider or interval scale (0 to 10), with anchors ranging from "Very Low / Not at all" to "Very High / Extremely." Scores were typically averaged across the six dimensions. The NASA TLX is a widely validated workload assessment tool

(ResearchGate, 2015; ResearchGate, n.d.-c). A shortened version, without weighting and pairwise comparisons, was utilized in this study, which is common in cognitive load measurement (ResearchGate, 2015). Research has explored cognitive load in relation to e-commerce and payment methods, noting its impact on user satisfaction and performance (PMC, 2019; ResearchGate, 2010).

Open-Ended Reflections: The questionnaire concluded with 2 custom open-ended questions designed to elicit qualitative insights. These questions sought to understand participants' perceptions of influences on payment method choices in their country and factors that would motivate them to switch to an alternative payment method. These responses were intended for thematic or qualitative coding analysis.

3.5 Data Analysis

Data collected from the questionnaire were used to calculate both quantitative and qualitative analyses to address the study's objectives.

3.5.1 Quantitative Data Analysis

Quantitative data was analyzed using Microsoft Excel to compute descriptive and inferential statistics.

Descriptive Statistics: Frequencies and percentages were calculated for demographic variables (country, age, gender, education) and preferred payment methods. For continuous scales, including System Usability Scale (SUS) scores, NASA TLX dimensions, Trust & Security scores, and Cultural Orientation scores, means, standard deviations, and ranges were computed. These descriptive statistics were calculated both for the overall sample and disaggregated by country, with optional subgroup analysis for age and gender.

- **Inferential Statistics:**

- **Comparisons between India and Italy:** Independent samples t-tests were employed to compare the means of continuous variables (e.g., SUS scores, NASA TLX scores) between participants from India and Italy. For categorical variables, such as preferred payment method, Chi-square tests were conducted to assess differences in usage patterns between the two countries.
- **Correlations:** Spearman's rho was used to explore correlations involving ordinal data, such as age versus SUS scores. For other relationships, such as Trust scores versus SUS or NASA TLX scores, and Cultural Orientation versus SUS or Trust scores, either Pearson or Spearman correlation coefficients was calculated depending on the normality of data distribution. These analyses aim to reveal patterns and potential relationships useful for understanding user experience and informing targeted interventions.

Specific Scale Calculations:

System Usability Scale (SUS): The 10-item SUS was scored according to Brooke's (1996) standard methodology, where odd-numbered item scores are calculated as (response-1),

even-numbered items as (5–response), and the total sum is then multiplied by 2.5 to yield a final score ranging from 0 to 100 (Brooke, 1996; PMC, n.d.).

NASA TLX (Short Version): Scores for the 6 dimensions of the NASA TLX (Mental Demand, Physical Demand, Temporal Demand, Effort, Performance, Frustration) were averaged, utilizing the 0–10 scale. No weighting or pairwise comparisons were applied, consistent with the short version's methodology (ResearchGate, 2015; ResearchGate, n.d.-c).

Trust & Security: A composite score for Trust & Security was derived by summing or averaging the responses from the 4 Likert items (1–5 scale).

Cultural Orientation: Similarly, an overall Cultural Orientation score was obtained by summing or averaging the responses from the 5 Likert items (1–5 scale).

3.5.2 Qualitative Data Analysis

Qualitative data, specifically from the open-ended reflections in Section 5 of the questionnaire, was analyzed using thematic analysis through manual coding. The analytical process involved several steps:

1. **Familiarization:** Initial immersion in the data by reading all responses to gain a general understanding of the emerging themes.
2. **Initial Coding:** Assigning short, descriptive codes to relevant segments of the text.
3. **Theme Development:** Grouping initial codes into broader, more meaningful categories such as Trust/Security Concerns, Usability/Convenience, Institutional Influence, Cultural or Peer Influence, and Barriers to Switching.
4. **Review Themes:** Iteratively refining and adjusting themes, combining similar ones, or splitting overly broad ones to ensure clarity and distinctiveness.
5. **Interpretation:** Linking the identified qualitative themes back to the quantitative results to build a comprehensive narrative, providing deeper context and support for the statistical findings.

4. Results

This section presents the findings from the questionnaire, beginning with descriptive statistics for participant demographics and preferred payment methods, followed by an overview of the scores obtained for System Usability, Cognitive Load, Trust & Security, and Cultural Orientation. Subsequently, inferential statistics comparing India and Italy, and examining correlations between key variables, are presented. Finally, qualitative insights from open-ended responses are discussed.

4.1 Demographic Characteristics A total of 59 participants completed the questionnaire, with a relatively balanced representation from the two target countries: 33 participants (55.93%) from Italy and 26 participants (44.07%) from India. The age distribution skewed towards younger cohorts, with the largest group being 18–24 years ($n=29$, 49.15%), followed by 25–34 years ($n=15$, 25.42%). Other age groups included 45–54 years ($n=9$,

15.25%), 35–44 years (n=3, 5.08%), and one participant each for 55–64 years, 65+ years, and 'Prefer not to say' (1.69% each).

In terms of gender, the majority of participants identified as Man (n=36, 61.02%), with 22 participants identifying as Woman (37.29%), and one participant preferring not to disclose (1.69%). Educational attainment was high among respondents, with most holding an Undergraduate degree (n=34, 57.63%) or a Postgraduate degree (n=18, 30.51%). A smaller number reported High school or less (n=4, 6.78%), with one participant indicating 'Other' and one preferring not to say (1.69% each).

4.2 Preferred Payment Methods Across the overall sample, mobile wallets (Google Pay, Apple Pay, or other mobile wallets) emerged as the most preferred in-person payment method, cited by 44 participants (74.58%). Debit/Credit cards were preferred by 13 participants (22.03%), while Cash and PhonePe each accounted for one participant (1.69% each).

When analyzed by country, distinct preferences were observed. Mobile wallets were overwhelmingly preferred by Indian participants (n=22, 84.62%), with a smaller proportion preferring Debit/Credit cards (n=2, 7.69%), Cash (n=1, 3.85%), and PhonePe (n=1, 3.85%). For Italian participants, while mobile wallets were still the most preferred method (n=22, 66.67%), Debit/Credit cards held a significantly higher preference compared to India, chosen by 11 participants (33.33%).

4.3 Perceived Usability (System Usability Scale - SUS) The overall perceived usability of preferred payment methods, as measured by the SUS, was high, with a mean score of 86.65 (SD = 13.78, Min = 50.00, Max = 100.00).

A notable difference was observed between the two countries. For India, the mean SUS score for preferred payment methods was 80.38 (SD = 17.43, Min = 50.00, Max = 100.00). In contrast, Italian participants reported a higher mean SUS score of 91.59 (SD = 7.07, Min = 72.50, Max = 100.00), indicating a very high perceived usability of their chosen payment methods.

4.4 Cognitive Load (NASA TLX Dimensions) The subjective workload associated with using preferred payment methods varied across the six NASA TLX dimensions, as detailed in the table below:

Dimension	Group	Mean	SD	Min	Max
Mental Demand	Overall	2.68	2.60	0.00	10.00
	India	3.77	3.01	0.00	10.00
	Italy	1.8	1.0	0.0	5.0

Dimension	Group	Mean	SD	Min	Max
		8	50	00	0
Physical Demand	Overall	2.92	2.33	0.00	7.00
	India	2.31	2.16	0.00	7.00
	Italy	3.41	2.38	0.00	7.00
Temporal Demand	Overall	3.12	2.31	0.00	10.00
	India	2.00	1.95	0.00	8.00
	Italy	4.06	2.47	0.00	10.00
Effort	Overall	1.83	2.04	0.00	8.00
	India	1.85	2.27	0.00	8.00
	Italy	1.82	1.86	0.00	7.00
Performance	Overall	7.59	2.87	0.00	10.00
	India	6.81	3.53	0.00	10.00
	Italy	8.21	2.07	2.00	10.00
Frustration	Overall	1.69	1.84	0.00	7.00
	India	1.46	2.04	0.00	6.00

Dimension	Group	Mean	SD	Min	Max
	Italy	1.88	1.67	0.00	7.00

Generally, perceived cognitive load dimensions (Mental Demand, Physical Demand, Temporal Demand, Effort, Frustration) were low to moderate across the sample. Performance ratings were relatively high, suggesting participants generally felt successful. Notably, Indian participants reported higher Mental Demand but lower Physical and Temporal Demand compared to Italian participants. Performance was rated higher by Italian participants.

4.5 Trust & Security (Composite Score) The overall perceived Trust & Security in preferred payment methods was high, with a mean composite score of 4.03 (SD = 1.05, Min = 1.00, Max = 5.00) on a 5-point scale. Country-specific scores were very similar, with India showing a mean of 4.04 (SD = 1.28, Min = 1.00, Max = 5.00) and Italy a mean of 4.03 (SD = 0.85, Min = 2.00, Max = 5.00).

4.6 Cultural Orientation (Composite Score) The overall Cultural Orientation composite score was 2.69 (SD = 1.16, Min = 1.00, Max = 5.00) on a 5-point scale, suggesting a somewhat neutral to slightly traditional orientation on average across the sample. Differences were observed between countries; India had a mean of 2.46 (SD = 1.30, Min = 1.00, Max = 5.00), indicating a slightly less traditional (or more open to non-traditional) orientation on this scale compared to Italy, which had a mean of 2.88 (SD = 1.02, Min = 1.00, Max = 5.00), suggesting a slightly more traditional or familiar-preference orientation.

4.7 Comparative Analysis (Inferential Statistics)

4.7.1 Independent Samples t-Tests Independent samples t-tests were conducted to compare mean scores between participants from India and Italy across the various scales.

Variable	t-statistic	df	p-value	Cohen's d
SUS	-3.085	57	0.0042	-0.882
Trust	0.028	57	0.9778	0.008
Culture	-1.339	57	0.1870	-0.361
NASA TLX – Mental Demand	2.897	57	0.0061	0.802

Variable	t-statistic	df	p-value	Cohen's d
NASA TLX – Physical Demand	1.978	57	0.0556	0.555
NASA TLX – Temporal Demand	-3.275	57	0.0018	-0.846
NASA TLX – Effort	0.051	57	0.9598	0.014
NASA TLX – Performance	-1.798	57	0.0801	-0.500
NASA TLX – Frustration	-0.842	57	0.4039	-0.226

Significant differences ($p < 0.05$) were found in SUS scores, with Italy reporting significantly higher usability ($t(57) = -3.085$, $p = 0.0042$, Cohen's $d = -0.882$). Significant differences were also found in two NASA TLX dimensions: Mental Demand, with India reporting significantly higher mental demand ($t(57) = 2.897$, $p = 0.0061$, Cohen's $d = 0.802$), and Temporal Demand, with Italy reporting significantly higher temporal demand ($t(57) = -3.275$, $p = 0.0018$, Cohen's $d = -0.846$). No significant differences were observed between India and Italy for Trust, Cultural Orientation, Effort, Performance, or Frustration. Physical Demand approached statistical significance ($p = 0.0556$), with Italy reporting higher physical demand.

4.7.2 Chi-Square Test for Payment Method by Country A Chi-square test was performed to examine the association between preferred payment method and country of residence.

Chi-square statistic	df	p-value
7.506	3	0.0574

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The Chi-square test revealed a marginally significant association between preferred payment method and country ($\chi^2(3) = 7.506$, $p = 0.0574$), suggesting a tendency for different payment method distributions between India and Italy, although it did not reach the conventional level of statistical significance ($p < 0.05$).

4.7.3 Spearman Correlations Spearman correlation coefficients were calculated to explore relationships between age and various scale scores, as well as between Trust, Cultural Orientation, SUS, and NASA TLX.

Correlation	ρ (rho)	p-value
Age vs. SUS (Overall)	-0.00 0	0.998 2
Age vs. SUS (India)	0.25 9	0.210 4
Age vs. SUS (Italy)	0.08 0	0.658 0
Trust vs. SUS (Overall)	0.06 8	0.608 2
Trust vs. SUS (India)	0.24 9	0.220 1
Trust vs. SUS (Italy)	-0.02 0	0.910 3
Trust vs. NASA TLX (Overall)	-0.11 4	0.389 7
Trust vs. NASA TLX (India)	-0.14 2	0.489 7
Trust vs. NASA TLX (Italy)	-0.11 5	0.525 3
Culture vs. SUS (Overall)	-0.12 6	0.341 2
Culture vs. SUS (India)	-0.57 4	0.002 2
Culture vs. SUS (Italy)	0.30 3	0.086 1
Culture vs. Trust (Overall)	-0.07 4	0.577 7
Culture vs. Trust (India)	-0.15 0	0.464 1
Culture vs. Trust (Italy)	0.01	0.935

Correlation	ρ (rho)	p-value
	5	2

The correlation analysis revealed one statistically significant relationship: a strong negative correlation between Cultural Orientation and SUS scores for participants in India ($\rho = -0.574$, $p = 0.0022$). This suggests that in India, a more traditional cultural orientation is associated with lower perceived usability of payment methods. No other significant correlations were found between the tested variables in the overall sample or for Italy.

4.8 Qualitative Data Analysis – Open-Ended Reflections Thematic analysis of the open-ended responses provided deeper insights into the factors influencing payment method choices and intentions to switch.

4.8.1 What Influences People to Use a Specific Payment Method? Several key themes emerged regarding the influences on payment method adoption. Participants frequently highlighted the convenience and ease of use, emphasizing how easy and quick it is to use certain payment methods, especially mobile wallets. For instance, responses included, *"It's just easy. I just have to have my phone with me."* (Italy) and *"Fast and hassle-free."* (India). Another significant theme was merchant acceptance and infrastructure, where the availability and compatibility of payment methods at local stores were frequently mentioned. Respondents noted the *"Availability of payment method."* (Italy) and that *"Some shops accept UPI, some don't, so people go with what's accepted."* (India).

Trust and security concerns also played a crucial role, with Italian participants, in particular, expressing a lack of trust in banks and digital systems, influencing their payment preferences. One Italian respondent stated, *"Many people in Italy still do not trust the banking system."* In India, there was a sentiment that *"People in India are more comfortable with traditional options for large transactions."* Furthermore, peer behavior and social influence were noted, as respondents observed that people often use the payment methods they see others using, exemplified by an Indian participant who said, *"Everyone uses it, so I also just use GPay."* Finally, government or employer influence was mentioned, particularly in Italy, where individuals cited cash usage due to unrecorded income: *"Since most sources of income are in cash, people tend to use cash more often."* (Italy). Country-specific differences in these influences were apparent, with Italy's responses frequently revolving around trust issues with banks and the prevalence of cash often linked to informal employment, while India's responses placed greater emphasis on peer influence and the widespread acceptance of UPI-based applications.

4.8.2 What Would Make You Switch to Another Payment Method? Themes related to willingness to switch payment methods included a strong desire for enhanced security and safety, with respondents showing willingness to switch if better protection or fraud prevention were assured. Participants expressed sentiments like *"Something more secure would make me switch."* (India) and a desire for *"Add confirmation before paying."* (Italy). The wider acceptance or usability of a method across more vendors or contexts was also

identified as a strong motivator; an Indian participant noted, *"If it works in more places, I'll switch."*

Participants also favored switching to something more convenient and simple, seeking methods that are more user-friendly or less cumbersome, with quotes such as *"A simple, reliable, and commission-free method."* (Italy) and *"Something more convenient or safe."* (Italy). While not strongly articulated in this specific sample, the underlying implication was that economic incentives such as discounts, rewards, or lower transaction fees could influence decisions. In terms of country differences regarding switching motivations, Indian participants showed more emphasis on the availability, interoperability, and trustworthiness of a new method. Italian participants, conversely, prioritized simplicity, heightened security, and the inclusion of transactional confirmation features.

5. Discussion

5.1 Summary of Key Findings

This comparative study revealed several key insights into mobile wallet adoption and payment preferences in India and Italy. Mobile wallets were the most preferred in-person payment method across the sample, though distinct country-specific patterns emerged. Indian participants overwhelmingly preferred mobile wallets (84.62%), while Italian participants showed a higher preference for debit/credit cards (33.33%), although mobile wallets still held the majority preference (66.67%).

Regarding perceived usability, Italian participants reported significantly higher **System Usability Scale (SUS) scores** (mean = 91.59) for their preferred payment methods compared to Indian participants (mean = 80.38). In terms of **cognitive load**, Indian participants experienced significantly higher **Mental Demand**, while Italian participants reported significantly higher **Temporal Demand**. Interestingly, perceived **Trust & Security** in preferred payment methods was consistently high and similar across both countries. **Cultural Orientation** showed a slight difference, with India exhibiting a less traditional orientation than Italy, though this difference was not statistically significant.

A crucial finding was the significant **negative correlation between Cultural Orientation and SUS scores in India**, indicating that a more traditional cultural outlook was associated with lower perceived usability of payment methods. This relationship was not observed in Italy. Qualitative data further enriched these findings, highlighting convenience and infrastructure as key drivers in both countries, while Italian participants frequently expressed a lack of trust in banks and digital systems, and Indian participants emphasized peer influence and widespread acceptance of UPI. Motivations for switching payment methods centered on enhanced security, wider acceptance, and greater convenience for both groups.

5.2 Interpretation of Findings in Relation to Literature

The findings of this study largely align with and provide nuanced additions to the existing literature on mobile wallet adoption. The overwhelming preference for mobile wallets in India, driven by UPI, strongly corroborates previous research emphasizing its

transformative impact and widespread adoption due to convenience, security, and low transaction costs (JETIR.org, n.d.; ResearchGate, n.d.-a; IRJMETs, 2025). The high reported usability (SUS scores) for preferred methods in both countries, particularly the very high scores in Italy, suggests that users generally find their *chosen* methods easy to use, regardless of the prevalence of mobile wallets. This helps explain why card payments remain prevalent in Italy; while mobile wallets *are* usable, traditional card systems are also perceived as highly usable and are culturally ingrained.

The slower adoption of mobile wallets in Italy, despite their perceived usability by users who *do* adopt them, resonates with literature highlighting a strong cultural preference for traditional payment methods and a higher reliance on cash, especially among older generations (ResearchGate, 2025). The qualitative data, which frequently cited a lack of trust in banking systems and the prevalence of cash due to unrecorded income in Italy, directly supports the notion of "tradition" and "risk" as significant impediments to adoption (ResearchGate, 2025). While our quantitative trust scores were similar, the qualitative data suggests a *specific* distrust in the *system*, not necessarily the payment method itself, which warrants further exploration.

The significant negative correlation between cultural orientation and SUS in India is a particularly interesting addition to the literature. It suggests that, in a rapidly digitalizing economy like India, those with more traditional views may perceive even highly usable digital tools as less user-friendly, possibly due to a comfort with established, non-digital practices. This could be a barrier to even broader adoption beyond the already tech-savvy population mentioned by IRJMETs (2025). This also aligns with the concept of "uncertainty avoidance" influencing mobile payment acceptance, as traditional mindsets might be more averse to the perceived risks or newness of digital platforms (Euroasia Journal, 2025; ResearchGate, n.d.-b).

Regarding cognitive load, the higher **Mental Demand** reported by Indian participants for their preferred payment methods, despite mobile wallets being highly adopted, could indicate the complexity of navigating a diverse digital payment ecosystem or managing multiple UPI-enabled applications. Conversely, Italy's higher **Temporal Demand** might reflect slower processing times for traditional card transactions or the mental effort of adapting to newer, faster digital methods when they are used.

The similar Trust & Security scores, despite differing adoption rates, suggest that while users in both countries *trust* their chosen method, the *factors* influencing that trust might differ. In India, trust might be built on the robustness of UPI and its governmental backing, whereas in Italy, trust might be more rooted in established banking systems for card payments. This highlights that "trust" is multifaceted and influenced by different contextual elements, as suggested by literature on perceived usefulness and service provider reputation (LPCPS E-Sarathi, 2024; MDPI, n.d.).

5.3 Implications of Findings

The findings of this study hold significant implications for various stakeholders involved in the digital payment ecosystem.

For **mobile wallet providers** (e.g., Google Pay, Apple Pay, PhonePe, Paytm), the insights are clear. In India, despite high adoption, addressing the higher perceived mental demand through simplified interfaces or enhanced onboarding for less tech-savvy individuals could boost penetration and satisfaction. The strong influence of "everyone uses it" underscores the need for continued emphasis on network effects and community engagement. Providers should also consider how to mitigate the negative correlation between traditional cultural orientation and perceived usability. For Italy, where high SUS scores exist for preferred methods even if they are cards, mobile wallet providers need to demonstrate clear superiority in convenience and security. Addressing the deeply rooted distrust in the banking system, highlighted qualitatively, is paramount; this might involve transparent communication about data privacy, stronger regulatory assurances, and partnerships with trusted traditional financial institutions. Emphasizing simplicity, heightened security, and transactional confirmation features, as desired by Italian participants, could be powerful marketing angles.

For **policymakers and governments** (e.g., Reserve Bank of India, Bank of Italy), the path forward involves strategic interventions. In India, continued government support for UPI and similar initiatives is crucial, along with efforts to bridge the usability gap for traditionally oriented individuals through public awareness campaigns that demystify digital payments. In Italy, policies aimed at encouraging digital payments should focus on building public trust in digital financial infrastructure. This could involve stronger consumer protection regulations, public education campaigns to address data privacy concerns, and incentives for both consumers and merchants. Addressing underlying reasons for cash usage, such as unrecorded income, might also be necessary for a substantial shift towards digital transactions.

Banks and financial institutions in both countries have a critical role in fostering trust and security. While overall trust in preferred methods is high, continuous investment in robust security features and transparent communication is essential. In Italy, banks are key to rebuilding public trust in digital financial systems; collaborating with mobile wallet providers and demonstrating strong data security practices can accelerate adoption.

Overall, the study underscores that while technical usability is important, socio-cultural factors, trust in institutions, and the existing payment landscape profoundly shape adoption rates.

5.4 Limitations of the Study

Despite providing valuable insights, this study faces several limitations that warrant consideration. Firstly, the **sample size and distribution** are relatively small, with only 59 participants, which inherently restricts the generalizability of the findings. While there was an effort to balance participants between India (26) and Italy (33), a larger and more demographically diverse sample, especially including a greater representation of older age groups, would strengthen the statistical power and external validity, particularly given the prevalence of cash usage among older Italians. Secondly, the reliance on **self-reported data** through questionnaires means the findings are susceptible to biases like social desirability or inaccuracies in recall. Thirdly, the study utilized **custom scales** for "Trust &

Security" and "Cultural Orientation." Although these were informed by existing literature, their psychometric properties—such as reliability and validity—were not formally established or rigorously tested beyond internal consistency within this study. This limitation reduces the confidence in their precise measurement and the comparability of these specific findings with other research.

Furthermore, the **cross-sectional design** of the study captures preferences and perceptions at a single point in time. A longitudinal approach would be necessary to understand how payment preferences and adoption evolve over extended periods in response to technological advancements or policy changes. The **scope of payment methods** examined was also broad, encompassing "mobile wallets," "debit/credit cards," and "cash," but without a deep dive into the unique features or specific variations within these categories (e.g., different mobile wallet apps, specific card types). This broad categorization might obscure nuances in user experience. Lastly, while "Cultural Orientation" was explored, culture itself is a multifaceted construct, and the custom scale may not have fully captured the **complex interplay of cultural norms, values, and beliefs** that truly influence financial behaviors in these distinct regions.

5.5 Future Research

Building upon the findings and addressing the limitations of this study, several promising avenues for future research emerge. A critical next step involves conducting studies with **larger and more representative samples** in both India and Italy. This would include a greater focus on capturing the experiences and preferences of older demographic groups, who were underrepresented in the current sample. Furthermore, **longitudinal research** would be invaluable for understanding the dynamic evolution of mobile wallet adoption, perceptions of usability, and trust as technologies advance and policies shift over time.

To enhance the rigor of measurement, future efforts should prioritize the **formal validation of the custom scales** used for "Trust & Security" and "Cultural Orientation." This would entail comprehensive psychometric testing, including analyses of internal consistency, factor structure, and convergent and discriminant validity, ensuring these instruments are robust for subsequent research. Complementing quantitative surveys, **qualitative deep dives** such as in-depth interviews or ethnographic studies could provide richer, more nuanced insights into the underlying motivations, perceptions, and cultural factors influencing payment choices, particularly for non-adopters in Italy.

Research could also delve into the **cognitive ergonomics of specific mobile wallet applications**, conducting detailed usability tests to identify particular pain points or design strengths that influence user experience. Moreover, it would be beneficial to investigate the **direct impact of various economic incentives** (like cashback or loyalty programs) and specific **governmental policies** on mobile wallet adoption rates in both countries, offering actionable insights for providers and policymakers. Exploring the relationship between **financial literacy levels** and mobile wallet adoption, especially in Italy where distrust in the banking system was noted, could shed light on effective educational interventions. Finally, developing and applying **more robust cross-cultural frameworks** to analyze digital payment adoption, moving beyond a simple measure of "traditionalism," could provide a deeper and

more comprehensive understanding of the intricate cultural nuances influencing technology acceptance.

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