RESEARCH ARTICLE

E-commerce: Recommended Online Payment Method - PayPal

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Abstract—This paper gives the information and recommended online payment method and comparison with outstanding Online Payment Systems. A payment gateway is an electronic-commerce application service provider provision that authorizes credit card payments for electronic businesses, online retailers, bricks and click/s. PayPal is the preferred method of payment for almost a quarter of all online shoppers. PayPal has a reputation for security, protecting the interests of both merchants and consumers. It is also a convenient option for consumers and merchants. Consumers spend less time entering their information; merchants can set up a payment system quickly, with no upfront payment required.

Keywords— E-commerce, SET, Online Payment Systems, stripe, Recommended online Payment Method-PayPal Advantages

I. INTRODUCTION

E-commerce refers to businesses and consumers buying and selling products online. The preponderance of e-commerce websites on the internet are retail stores selling products directly to the public. While buying products online, it is very important that you select the right payment method for yourself. Before you buy an item, always make sure that the seller's payment methods will work for you. Online Payment Methods : Online Bank Transfer, Credit Card, Debit Card, Cash Card, Mobile Payment (IMPS./Airtel Money). A payment gateway is what enable the credit card transactions to take place. It's a layer of processing that interface with your ecommerce site and your merchant-account. This is wherever security, encryption and all that important stuff come into play.

This study proposing PayPal is the best and recommended online payment method. PayPal has a reputation for security, protecting the interests of both merchants and customers. It is also a convenient option for patrons and merchants. Consumers spend less time entering their information; merchants can set up a payment system quickly, with no upfront payment necessary.

An e-commerce payment system facilitates the acceptance of electronic payment for online transactions. Also known as a sample of Electronic Data Interchange (EDI), e-commerce

payment systems have become gradually more popular due to the widespread use of the internet-based shopping and banking.

PayPal is a global e-commerce business allowing payments and money transfers to be made through the Internet. Online money transfers serve as electronic alternatives to paying with traditional paper methods, such as checks and money orders. It is subject to the US economic sanction list and other rules and interventions required by US laws or government. PayPal is an acquirer, performing payment processing for online vendors, auction sites, and other commercial users, for which it charges a fee. It may also charge a fee for receiving money, proportional to the amount received. The fees depend on the money used, the payment option used, the country of the sender, the country of the receiver, the amount sent and the recipient account type. (Resource: http://en.wikipedia.org/wiki/E-commerce_payment_system)

II. AIM OF THE STUDY

- To know the concept of E-commerce
- To understand Security Electronic Transaction
- Knowledge on kinds of Online Payment Systems
- Comparing PayPal versus stripe, google checkouts and amazon payments
- Recommending best payment method - PayPal with pros and cons

III. RELATED WORK

This paper firstly analyze the boundaries of the conventional model of the 3rd payment, then puts forward a kind of online payment model of the third-party payment based on the two-way management method; it stresses integration of the logistics, information flow, fund flow, business flow and government affairs flow in E-commerce to reduce the online payment risks of the customers, and it emphasizes the structure and the security measures of the collaborative management model of the online third-party payment.[1]

The construction of the online payment market has been the hot spot of the development of electronic-commerce, and how to improve the electronic payment market to solve the bottleneck of e-commerce payment is the focal point. This paper uses the standardize methods to analyze the problems in the development of the third-party payment and holds that much importance should be attached to risks in the development of third-party payment, and take some procedures such as increase supervision, improve the legal system and business and services novelty to promote the growth of third-party payment in our country.[3]

In the context of the growth of e-commerce on the Internet, a lot of electronic payment systems have been set up in order to secure online payments. To understand the success of Internet payment system it is essential to analyze the strategies of e-commerce actors: customers, "cyber merchants", managers of networks (telecommunications and payment), suppliers of electronic payment services and banks. Our results provide objective explanations of the success factors of Internet payment systems, and the domination of SSL card payment in the market. Only PayPal could, in the middle term, compete with the SSL card payment. Moreover, failed experiences show that it is necessary to consider network effects and which business models to implement in order to avoid killing a new Internet payment system before it is launch.[5]

Through third-party brokers paid model: Its characteristic is as follows: Bank card information is not open to the broadcast network, is paid by users. Both businessmen trusted third party (agents) to complete (See fig. 2.)
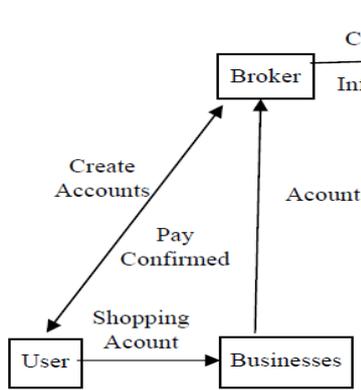
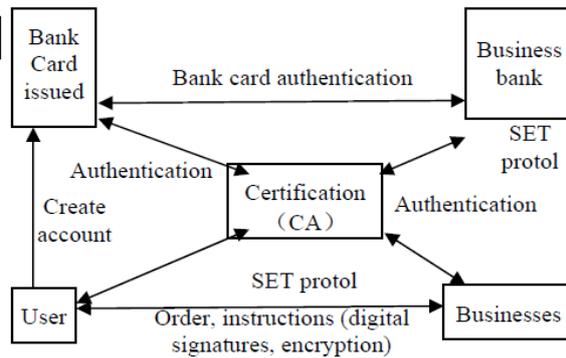Fig.2 Through third-party brokers paid model   Fig.4 SET model

SET (security electronic transaction) model: "Secure Electronic Transactions," and referred to the SET. In an open Internet is a understanding of the global agreements and standards for secure electronic transactions. Their characteristics are as follows: SET transactions participants to provide certification to ensure data security, integrity and non-repudiation of transactions, in particular to ensure that no information leaked to the cardholder's account for the businesses. Guarantee the safety of the SET. Such a system more suited to the B to C mode of transaction (See Fig.4).[6]

IV. PAYMENT METHODS

Making purchases through the Internet is a fact today and is successful. And one of the best gear that the Web offer today is the capability to take your business wherever on the planet through a website. This is why it became essential to purchase via the Internet through many payment service provider. Payment Service Provider, is a company that provides online marketing services, it accepts payments electronically by managing transactions between seller and buyer. The most common payment methods that are usually offered are by credit card, bank transfer and real time orders. In addition, PSP offer full guarantee against any risks, especially with global transactions, and thus gain the confidence of consumers who use them. All online payment systems are assigned a tax rate on transactions, fixed or variable.[7]

Online Payment Systems: 1. Square, 2. Google Wallet/ Google Checkout, 3. Dwolla, 4. Amazon Payments, 5. 2CheckOut, 6. PayPal, 7. Skrill (before Moneybookers), 8. WePay, 9. V.me by Visa, 10. Intuit GoPayment, 11. Serve, from American Express, 12. Samurai, by Feefighters, 13. Authorize.Net, 14. Worldpay, 15. Eway, 16. Icepay, 17. Braintree, 18. Stripe

10 outstanding Online Payment Systems:

Authorize.Net: Authorize.Net is the Internet's most broadly used payment gateway. With a user base of over 300,000 merchants, Authorize.Net has been the go-to method for e-commerce sites that need a gateway to accepting payments. Widely used e-commerce platforms such as Magento, Volusion and X-Cart are designed to accept payments using Authorize.Net easier.

Pricing: Authorize.Net has a $99 setup fee, costs $20 per month and takes a $0.10 per-transaction fee. Source: Authorize.Net pricing.

PayPal: PayPal is the world's most broadly used payment acquirer, processing over $4 billion in payments in 2011. PayPal payments are made using a user's existing account or with a credit card. Money can be sent directly to an email address, thus prompting the users to sign up for a new PayPal account. In addition to taking payments, PayPal also allow its users to send money through the service, which is a characteristic that only a few payment solutions provide.

Pricing: PayPal takes 2.9% + $0.30 per transaction and has no setup or monthly fees. Source: PayPal merchant fees.

Google Checkout: Google Checkout is Google's answer to PayPal. Google Checkout allow users to pay for goods and services through an account linked to their Google profile. The major benefit that Google Checkout has over the competition is that millions of Internet users use Google for other services, making a purchase through Checkout a simpler process.

Pricing: Google Checkout fees start at 2.9% + $0.30 per transaction for sales less than $3,000. The percentage they take goes down depending on monthly sales volume. Source: Google Checkout fees

Amazon Payments:Amazon Payments allows its users to receive money using its API (and to send money out via ACH). Popular crowdfunding site Kickstarter uses Amazon Payments.

Pricing: Amazon Payments fees start at 2.9% + $0.30 per business for payments over $10 (the percentage they take is less for larger transactions). For payments under $10, the fee is 5.0% + $0.05 per transaction. Source: Amazon Payments fees

Dwolla: Dwolla is a direct competitor to PayPal. One of the newcomers in the third-party payments space, the company is processing over $1 million per day. Setting up Dwolla payments is similar to PayPal, although Dwolla doesn't have the same name detection as their competition.

Pricing: There are no fees for transactions less than $10. For transactions over $10, Dwolla charges $0.25 per transaction. Source: Dwolla fees.

Stripe: Stripe provides an good payment solution for web developers who would like to integrate a payment system into their projects using Stripe's robust API. By bypassing the traditional sign up process, Stripe acts as a commercial account for its providers, handling all PCI compliance and merchant approvals.

Pricing: Stripe charges 2.9% + $0.30 per transaction with no setup or monthly fees. Source: Stripe: pricing.

Braintree: Braintree is an online payment gateway and commercial account solution known for working with popular tech startups such as Airbnb and LivingSocial.

Pricing: There are no set-up or monthly fees. Transaction fees are 2.9% + $0.30 per transaction for qualified cards. Source: Pricing – Braintree

Samurai: Samurai is a payment gateway and merchant account solution. The company's main product, FeeFighters, is a tool to help merchants evaluate rates for merchant accounts. Samurai was developed as a direct competitor to Braintree and other gateway/merchant solutions and offers customers a payment gateway or a gateway/merchant account package.

Pricing: For their gateway/merchant solution, Samurai takes 2.3% of all sales volume, costs $25 per month and charges a $0.30 fee per transaction. Source: Samurai by FeeFighters pricing.

WePay: WePay is a payment processor that allows Internet merchants to accept credit cards and bank account payments online. WePay seems to be focused on the individual user, and has recently added e-store pages to their service to help their clientele conveniently take in payments (e.g. event tickets, goods, donations and so onward) through their service.

Pricing: WePay charges a 3.5% transaction fee (with a $0.50 minimum) for credit card transactions and $0.50 for bank payments, with no setup or monthly costs. Source: WePay fees.

2Checkout: 2Checkout is one of the another payment processor that combine a merchant account and payment gateway into one, allowing clientele to receive credit card payments as well as PayPal payments. The company offers global payments, shopping cart stores as well as a recurring billing feature.

Pricing: 3.99% (if you apply by May 1, 2012), a $0.45 transaction fee and $10.99 monthly service fee. Pricing and fees – 2Checkout[8]

V. **RECOMMENDED PAYMENT METHOD - PAYPAL**

A. 7 Advantages to Using PayPal to Buy Online:

1. Credit card security: When you sign up for a PayPal account, you type in the credit cards and bank accounts you wish to use for purchases one time on the PayPal secure system. Once that is accomplished, you never again have to reveal your credit card information online. By paying with PayPal, you keep your credit card information confidential, meaning that you can shop without worrying about a hacker downloading your account data from your online merchant.

2. Flexibility: Relieve yourself of the awkwardness and irritate of annoying to purchase goods and services online only to have your credit card decline. Because you can set up many bank accounts, debit cards, and credit cards to fund your PayPal account, you can rest assured that your PayPal purchases always go through the first time. PayPal will then look for money from your source based on the order you describe.

3. Send money: Whether you need to transfer money to a child at college or a friend in problem across the globe, PayPal users can immediately transfer money to them with just a click of the mouse. Save time and money over expensive Western Union style transfers while getting money to where you wish to send it sooner than ever.

4. The iPhone App: The PayPal iPhone application makes it easy to shop online and transfer money wherever you are. All you have to do is visit the Apple iTunes store and hunt for the PayPal app and you will be ready to transfer, send money, pay bills, review your transaction history, and make purchases right from the palm of your hand. Because PayPal will ask you to confirm transactions with a PIN, you can rest guaranteed that your finances are secure should your iPhone be lost or stolen. If you meet somebody you need to pay while out on the town, just bump iPhones and make your transfer.

5. Online Auctions: How could anyone talk about PayPal without mention eBay? Because PayPal is integrated with the online auction powerhouse, you can place bids and make purchases safely. Buyer safety and a planned complaint resolution process means that eBay bidders have more safety than most credit card holders when it comes to one of the most popular online shopping sites.

6. Cost: One of the best reasons for using PayPal is its cost: free. That's right. No annual membership fees, no processing fees, no service charges. Shoppers using PayPal get all the powerful advantages connected with the service and do not have to pay one.

7. Discounts: PayPal sponsors special discounts for customers that shop with PayPal at selected retailers. Users who visit paypal-shopping.com can find the latest special offers from company like HP, Barnes & Noble, Wal-Mart, Nike, and many more. The bottom line is that PayPal can save you money on the things you need at the places where you shop. To take benefit of the savings all you have to do is copy the special promo code from the PayPal shopping Web page and paste it into your order at your merchant's site when you pay with PayPal.[9]
The PayPal offers: PayPal is guaranteed against fraud, saving time, Sending Money abroad, Dispute resolution center, saving money

B. The disadvantages:

PayPal can immediately freeze your account and hold your money. This is a private company and not ruled by any federal banking regulations, there for have no need for your

authorization or approval for freezing your account. if they feel that you have stanch a fraud or violated they're policy your they might freeze your account and hold your funds till further notice . When your account is frozen it might take a while till PayPal decides to release your funds and might leave you with very limited options and without proper explanation.

C. PayPal Versus stripe:

paypal	*stripe*
Customers are sent to PayPal site	Customers never leave your site
2.9% + $0.30 per transaction 2.4% + $0.30 (when over $10K monthly sales)	2.9% + 30 cents per successful charge *
Funds available at once	Funds are held for 7 2 days
Available worldwide	Available to sellers in US, Canada and 11 more countries**

US transaction fees: Stripe -   2.5 + .30 per transaction,
          Paypal - 2.2 + .30 per transaction

A. User Experience

Paypal
- re-direct users to PayPal's website, away from yours
- users enter credit card details or log into Paypal account
- user confirms they want to allow company to bill them
- user is redirected to company site
- user gets what they paid for

Stripe
- user enters credit card details or logs into company site
- user gets what they paid for

B. Setup
Paypal
Paypal's setup process is lengthy and confusing. I felt like I just got the manual for a fusion reactor. I didn't look forward to completing it...

Stripe
Email, password, password -confirmation, done.
How easy is that? It was so fast I still retained some of my initial excitement and wanted to push further with my app just to see what I could do with Stripe. With Paypal, I just wished that the process would end.

C. Support
Paypal
- makes backwards-incompatible changes that have left a lot of websites broken without adequately communicating the impact their change would make with their customers, losing them money
- calling in can be a laborious, time-consuming process, which may not actually get your problem solved
- documentation on Paypal's site is extremely confusing, often times out of date, and developer details (what's needed to actually make things happen) are usually buried under heaps of marketing material

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- o email can take days to get a solution to a problem
- o some customers have had their accounts frozen for silly reasons

Stripe
- o interact through twitter, email, chat, or phone
- o chatroom with real developers and business staff you can talk to directly
- o they talk with you until your problem is solved and your technology is working

D. How does PayPal Function?

1) First of all: Register yourself

To be able to use PayPal, you need to have a valid email ID and a credit card or bank account (for ease of writing, I am going to say just "bank account" from now on).

You would register with PayPal using your email address as your user ID. You'll be identified with your email address.

After registration is done, you'll need enter your bank or credit card details in your profile.

2) Verify your bank account:

To verify that you have entered the correct bank account details, PayPal will transfer one or two very small amounts of money into your account. Once you receive these amounts in your bank account -you would need to go back to your PayPal profile and enter the amounts you've received. For example, if you've received $0.1 and $0.25 from PayPal -you would need to enter these numbers.

If you enter correct values, your bank/credit car account would be considered verified.

Your PayPal account is now ready and you can send/receive monies through it.

3) Receive payment through PayPal:

When you need to receive payment from someone -just tell that person your email ID which is registered with PayPal. It does not matter where the payer is located. All you need to tell her is your registered email ID.

When your payer has transferred money to your PayPal account -you will get an email informing that you have received this much amount from so-and-so person.

Now, either you can keep your money in your PayPal account or you can transfer it in your bank/credit card account. However, some countries, like India, do not allow you to keep money in your PayPal account. So, money will automatically be transferred to your bank/credit account soon after the payer makes payment.

Before transferring money to your bank/credit car account, PayPal will cut its commission (transaction fee). At present PayPal takes 3.4% of total transaction money. So, for each dollar, you'll get only 96.6 cents in your bank account.

4) Make Payment via PayPal:

You can use your PayPal account to send money as well. You can transfer money to anyone who has a verified PayPal account.

Just ask for the PayPal email ID of the person whom you want to pay.

Then go to your PayPal account and send the required amount to that email ID. PayPal will withdraw that amount from your bank account (or charge it to your credit card).

Then PayPal will cut its fee and transfer rest of the money to the payee. Payer and payee should negotiate in advance as to who will pay the transaction fee of PayPal. If payee is supposed to pay this fee then for a payment of $100 you can send $100 (and the payee will get $96.6). But if you're supposed to pay the fee then you should transfer the payment amount + PayPal fee.[10]
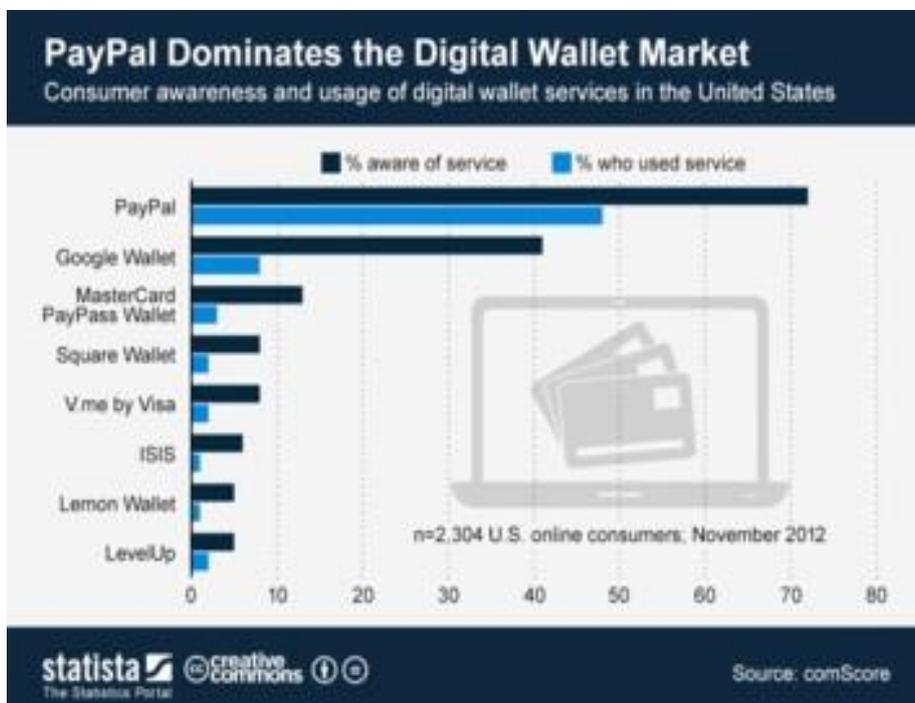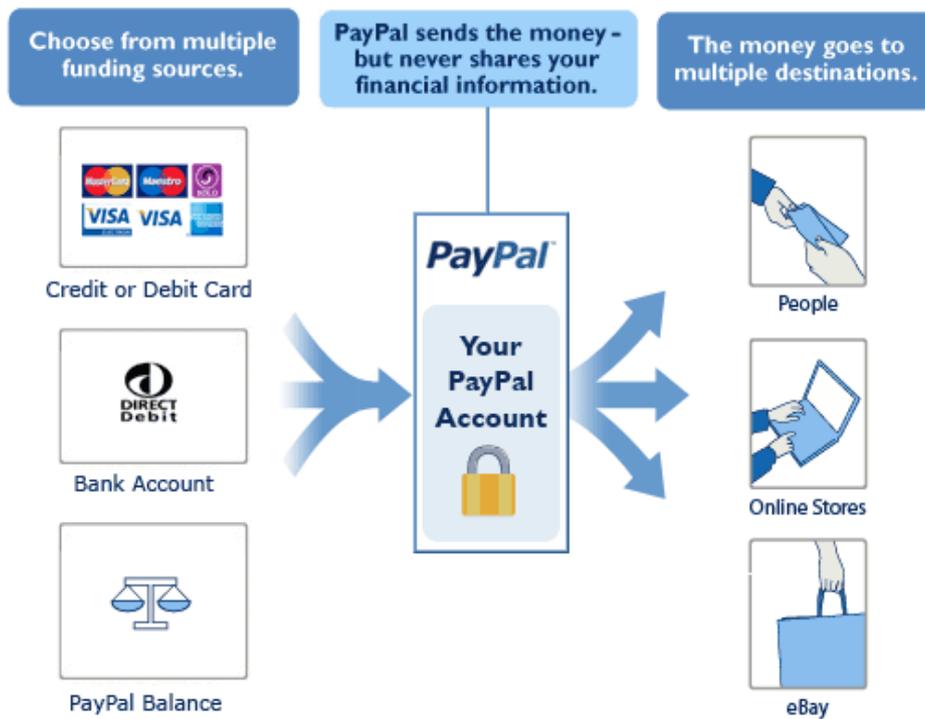
	PayPal Standard	PayPal Pro	Authorize.net	2Checkout	Stripe	BrainTree	WePay	Paymill	Dwolla	Google Wallet**
Works with Exchange?	Yes	In process	In process	In process	Yes	No	No	No	No	No
International availability?*	190 countries	190 countries	U.S., Canada, U.K. or Europe	Over 200 countries	U.S., Canada, U.K.; Beta in Belgium, France, Ireland & The Netherlands	U.S., Canada, Australia, Europe	U.S. only	39 countries (primarily in Europe)	U.S. only	U.S. only
Costs?	$0	$30/month	$99 setup, $20 month, varies by reseller	$0	$0	$0	$0	$0	$0	$0
Transaction fees? (outside the U.S. may vary)	2.9% + $0.30 per transaction	2.9% + $0.30 per transaction	0.10 per transaction plus merchant account fees, varies by reseller	U.S.: 2.9% + $0.30 per transaction	2.9% + $0.30 per transaction	2.9% + $0.30 per transaction	2.9% + $0.30 per transaction	2.95% + 0.28€ per transaction	$0.25 per transaction or free for transactions of $10 or less	Your standard processing fees apply, but nothing from Google
On site or off site payment processing?	Off Site	On Site	On Site & off Site	Off site	On Site	On Site	On Site	On Site	Off Site	Off Site (unless they're pre-signed in)
Payment accepted?***	Major credit cards, PayPal	Major credit cards, PayPal	Major credit cards, Diners Club, JCB, bank account payment	Major credit cards, JCB, Diners Club, PayPal	Major credit cards, JCB, Diners Club	Major credit cards, JCB, Diners Club	Major credit cards, bank account payment	Major credit cards, JCB, Diners Club, China Union, JCB	Dwolla	Major credit cards
Do you need a separate merchant account?	No	No	Yes	No	No	No, can use BrainTree as a merchant account or get your own	No	No	No	Yes, requires a payment processing system
Support?	Phone & email	Phone & email	Phone, email, live chat	Phone & email	Email	Phone & email	Phone, email, live chat	Phone & email	Email	Phone & email
Volume, micropayment or nonprofit discounts?	Yes, options for all three	Yes, options for all three	NA	NA	Volume discount	Volume discount	N/A	NA	Micropayment is free	NA

(Resource: http://ithemes.com/exchange-payment-gateway-comparison-chart/)

	Google checkout	**PayPal**	**amazon**payments
IN SUMMARY	Made by Google, the beloved search giant, Google Checkout syncs with Google Wallet, and caters to anyone with an existing Google account. (Let's face it—that's almost all of us).	PayPal is widely used, partly because it was one of the first on the market, and syncs to eBay. It's a reliable option and is a good choice for individual business owners that already have PayPal accounts. High transaction fees, the standard option takes buyers through PayPal's site, design is clunky, and a little ugly.	All hail Amazon, buyers' paradise. Amazon has two options—Checkout by Amazon and Amazon Simple Pay. The system caters to those who already use Amazon, but it's kind of ugly and overly branded.
PROS	Buyers trust it. It's fast, secure, and has convenient integration with Google Wallet.	Easy to use, automatic, customers are familiar with both PayPal and eBay, mobile swipe capabilities.	Two options, plus Checkout by Amazon Mobile. Amazon is trusted and familiar, and the payment method eliminates friction in buying process.
CONS	Required registration with Google, clunky design, can't be linked to bank accounts, and only one standard option. Also, who uses Google Wallet?	High transaction fees, the standard option takes buyers through PayPal's site, design is clunky and a little ugly.	High transaction fees, particularly for those who sell inexpensive goods.
BEST FOR	Those who believe all their customers are on Google, are collecting money for a one-time event, and are Google evangelists.	Those who need a quick solution and have little time to research or those who are just starting out.	Those who fear unexpected fees, non-profits (Amazon offers discounted rates), those who prioritize ease of use, and those who already have customers on Amazon.
HOW MUCH?	• **<$3,000:** 2.9% + $0.30 per transaction • **$3,000–$9,999.99:** 2.5% + $0.30 per transaction • **$10,000–$99,999.99:** 2.2% + $0.30 per transaction • **$100,000+:** 1.9% + $0.30 per transaction	• **Standard:** $0/month • **PayPal Payments Advanced:** $5/month • **PayPal Payments Pro:** $30/month • 2.9% + $0.30 per transaction • always free for buyers	• **<$9.99:** 5.0% + $0.05 per transaction • **>$10.00:** 2.9% + $0.30 per transaction (volume discounts available)

(Resource: Grasshopper)

VI. CONCLUSIONS

Paypal is only one of the world's most widely used payment acquirers processing some 8 million payments every day. As of this writing, PayPal has over 137 million active accounts in 193 markets and 26 currencies around the world, which makes it easy to transfer and request payments. Other PayPal perks include accepting checks through a Smartphone's camera, a card swiper, and allowing customers to make a purchase without leaving your site.There are many advantages of using PayPal for both, the seller and the customer. Advantages are Ease of setup, Brand name and recognition, Pricing policy, Huge potential customer base, Ease of execution, Multiple account options, Ability to accept international payments and cards, observance track of transactions, Integrating payments with eBay.

PayPal is now also an all-in-one online payment solution. Their Website Payments regular program lets you accept Visa, MasterCard, Discover, and American Express credit card payments as well as bank transfer and offer PayPal as well – with no monthly cost, setup or termination fees. PayPal charges you a fee of 1.9 to 2.9 percent of transaction plus 30 cents per order, depending on your company's sales volume. So this study recommending Paypal is the best payment method comparing to other online payment method.

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