

Personal Finance and Entrepreneurship: Budgets and a Feasible Venture

GAC034 public-outcome teaching; full centre guide governs assessed depth.

Connect personal money and a feasible venture

- Prepare a personal budget and a business plan.
- Use the centre brief for assessed formats and depth.
- Check that the numbers support the proposed activity.

Budget net income over a defined period

Budget requirement	Why it matters
Period and currency	Make amounts comparable; convert under a stated assumption.
Net, confirmed funding	Use money actually available after deductions; uncertain work is not guaranteed.
Complete costs and payment dates	Include insurance, travel, equipment and a reserve; funds must arrive before bills.

Use a purchasing model and compare credit carefully

Purchase decision

Define the need and essential criteria first.

Compare suitable options using total cost, then review the choice.

Funding decision

Compare full credit payments, fees, dates and obligations.

An expected investment return is uncertain; it is not confirmed spending money.

Entrepreneurship begins with a customer problem

Bean Cart: start with the unmet need

Intended customer: students near morning classes. Problem: getting a drink without a long detour or wait.

Proposed offer: clearly priced coffee with a short planned collection time.

Explain who pays, for what and why. Test the wait and demand claims before calling the venture feasible.

Make the marketing choices fit the same customer

Marketing choice	Check for Bean Cart
Product	Does the intended student want this drink and collection routine?
Price	Cover relevant costs and compare alternatives and willingness to pay.
Place	Can students reach the collection point before class?
Promotion	Describe the actual offer; research interest is not a paid order.

Operations and personnel make the promise deliverable

Map order → payment → preparation → collection → cleanup.



Calculate capacity and locate the bottleneck.



Cost staff time; plan training, absence cover and checked alternative supply.



Compare the operational limit with the sales forecast.

The financial plan answers several different questions

Financial question	Use the matching measure
One-time setup	Startup outlay and its funding
This period's result	Revenue minus relevant expenses: profit
Bills paid when due	Opening cash + receipts – payments
Position on a date	Assets, liabilities and equity

Use the evidence

Operating break-even does not recover every startup payment.

Build Lin's living-cost calculation

1 Monthly costs Rent 3,500; food 1,800; transport 400; phone 300 yuan.

2 Sum

$$C_m = C_{rent} + C_{food} + C_{transport} + C_{phone} = 3500 + 1800 + 400 + 300 = 6000 \text{ yuan.}$$

3 Annualise $C_y = 12C_m = 12(6000 \text{ yuan}) = 72000 \text{ yuan.}$

Add all expected annual spending

Expected annual spending	Yuan
Tuition	120,000
Living costs: $6,000 \times 12$	72,000
Insurance	3,000
Visa and travel	6,000
Books and equipment	4,000
Total expected spending	205,000

Use the evidence

Invented practice figures, not a current price guide.

Your turn: funds needed for the year

Your turn

Expected spending is 205,000 yuan. Add a chosen 10% reserve and an 8,000-yuan refundable deposit tied up until after this year. With 200,000 confirmed funds, find the total required and the planning gap.

Attempt the complete task before advancing. Show the method and interpret the result.

A reserve and deposit change required available funds

- 1 Chosen reserve** $reserve = spending \times rate = (205000 \text{ yuan})(0.10) = 20500 \text{ yuan}.$
- 2 Funds needed** $funds = spending + reserve + deposit =$
 $(205000 + 20500 + 8000) \text{ yuan} = 233500 \text{ yuan}.$
- 3 Interpret** Spending stays 205,000. Reserve may remain unused; the refundable deposit ties up cash until after the year.

Decision

The 10% reserve is this exercise's assumption, not a universal rule.

Check the funding gap and payment dates

- 1 Compare** Required available funds 233,500 yuan; confirmed annual funds 200,000 yuan.
- 2 Gap**
 $gap = funds\ needed - confirmed\ funds = (233500 - 200000)\ yuan = 33500\ yuan.$
- 3 Timing** Build a payment schedule too. An annual total may arrive after tuition, travel or deposit is due.

Planned saving must fit the monthly budget

Separate monthly budget	Yuan
Net income	7,000
Spending	—6,000
Planned saving	—500
Unexpected-needs reserve	—300
Unallocated remainder	200

Use the evidence

Compare actual with planned spending. If income falls, revise the plan.

Compare laptop total cost with required features

Laptop offer	Device + required extras	Total (yuan)
A	4,800 + software 600 + delivery 200	5,600
B	5,200; required extras included	5,200

Use the evidence

B saves 400 only if both satisfy the software and battery criteria.

Complete the decision model and name the opportunity cost

Define the need and essential criteria.



Compare suitable options and complete total cost.



Decide; name the best alternative use of money forgone.



Review whether the product actually meets the need.

Your turn: compare complete credit payments

Your turn

Both offers lend 6,000 yuan. A requires 550 monthly for 12 months plus a separate 120 fee. B requires 290 monthly for 24 months and no fee. Compare total cost and a monthly surplus of 400.

Attempt the complete task before advancing. Show the method and interpret the result.

Calculate complete payments for each credit offer

Credit offer	Monthly $\times$ months + fee	Total paid (yuan)
A: principal 6,000	$550 \times 12 + 120$	6,720
B: principal 6,000	$290 \times 24 + 0$	6,960

Use the evidence

The separate fee is counted once. These are complete invented payment assumptions.

Separate credit cost from monthly affordability

Total credit cost

A: $6720 - 6000 = 720$ yuan.

B: $6960 - 6000 = 960$ yuan. A is 240 cheaper overall.

Monthly affordability

Stated surplus after essentials: 400 yuan.

A's 550 does not fit; B's 290 fits that stated limit, but does not prove affordability for two years.

APR and contract details need more than a headline

Contract question	Evidence to check
APR and total cost	Annualised applicable calculation, timing, included charges and other fees
Repayment obligations	Due dates, term, changing rates and missed-payment consequences
Security or guarantor	Actual agreement and applicable jurisdiction; a guarantor can take on obligations

Use the evidence

APR is not simply total cost divided by the original principal.

Keep the simple-interest example separate

- 1 **Separate scenario** Principal 6,000 yuan remains outstanding for one year; rate 8%; no fees.
- 2 **Model** $I = Prt$ for simple interest.
- 3 **Substitute** $I = (6000 \text{ yuan})(0.08)(1) = 480 \text{ yuan}$.

Decision

This is not either instalment offer. Their outstanding balances and durations differ.

Choose saving and investment around the purpose

Money needed soon

Check access, fees and risk against the payment date.

Liquidity concerns access or conversion for use.

Uncertain investment

Returns can be below expectations or negative.

Diversification reduces some risks, not every loss; more risk does not guarantee a higher realised return.

Compound growth builds on the previous balance

Compound-growth scenario	Balance (yuan)
Start	3,000
After year 1: $3,000 \times 1.04$	3,120
After year 2: $3,120 \times 1.04$	3,244.80

Use the evidence

$A = P(1 + r)^n = 3000(1.04)^2 = 3244.80$ yuan. Fixed growth, retained interest, no fees/tax.

Bean Cart's value proposition needs a test

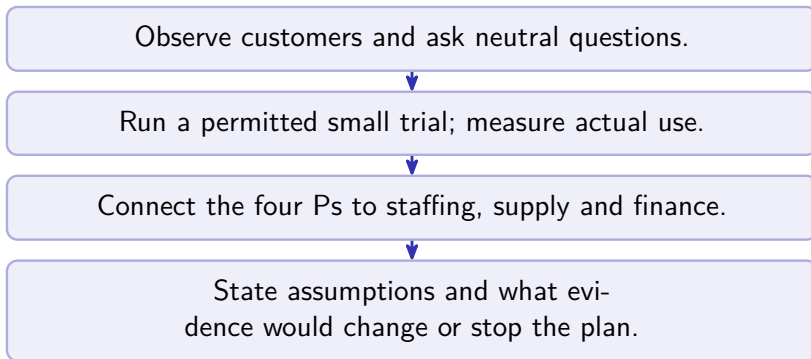
A value proposition is a testable promise

For students near morning classes, Bean Cart offers a clearly priced coffee at a convenient collection point.

The short-wait promise needs measured service times and actual use.

Identify alternatives and who would pay before treating an attractive idea as a feasible business.

Connect research, marketing and review decisions



Your turn: can the cart serve 900 cups?

Your turn

One worker serves a cup every three minutes for two hours daily over twenty working days. Calculate monthly capacity and assess a 900-cup forecast. Name one omitted operational constraint.

Attempt the complete task before advancing. Show the method and interpret the result.

Calculate the service capacity

- 1 Given** One worker, three minutes per cup, two service hours/day, twenty days/month.
- 2 Daily limit** $Q_d = (120 \text{ min/day}) / (3 \text{ min/cup}) = 40 \text{ cups/day}$.
- 3 Monthly limit** $Q_m = Q_d \times \text{days} = (40 \text{ cups/day})(20 \text{ days}) = 800 \text{ cups}$.

Decision

900 cups exceeds the stated limit. Setup, cleaning, breaks and faults can lower actual capacity.

Plan bottlenecks, staff cover and supply

Operation	If demand doubles, check...
Order/payment/preparation	Which step becomes the bottleneck? What change would remove it?
Collection/cleanup	Does increased output create a queue or neglected work?
Staff and supplies	Time, training, absence cover, lead times and a checked alternative supplier

Use the evidence

Owner time is not unlimited. A classroom plan is not operating permission.

Startup funding changes the form of assets

Startup position: no loan	Yuan
Owner investment / equity	15,000
Equipment purchased	12,000
Cash left for trading	3,000
Total assets: equipment + cash	15,000

Use the evidence

Buying equipment changes asset form; it is not sales or the full period's operating expense.

Classify costs before calculating break-even

- 1 **Classify** Price 15; ingredients 5 yuan/cup. Fixed operating costs 3,000 yuan/month exclude ingredients.
- 2 **Contribution** $c = p - v = (15 - 5) \text{ yuan/cup} = 10 \text{ yuan/cup}$.
- 3 **Break-even** $Q_{BE} = F/c = (3000 \text{ yuan})/(10 \text{ yuan/cup}) = 300 \text{ cups/month}$.

Decision

Do not count ingredients again in fixed costs. Ignore tax, depreciation and owner wages only under this simplified case.

Calculate operating profit at 600 cups

- 1 **Revenue** $R = pQ = (15 \text{ yuan/cup})(600 \text{ cups}) = 9000 \text{ yuan}.$
- 2 **Variable costs** $VC = vQ = (5 \text{ yuan/cup})(600 \text{ cups}) = 3000 \text{ yuan}.$
- 3 **Operating profit** $\pi = R - VC - F = (9000 - 3000 - 3000) \text{ yuan} = 3000 \text{ yuan}.$

Forecast cash with complete payment assumptions

Month 1 cash forecast	Yuan
Opening cash	3,000
Immediate customer receipts	+9,000
Ingredients + fixed costs paid	−6,000
Closing cash	6,000

Use the evidence

Assume immediate customer payment, same-month ingredients, monthly fixed costs, no new equipment, loans or withdrawals.

Carry the closing balance into the next month

Month	Cups	Cash equation (yuan)
1	600	$C_{close} = 3000 + 9000 - 6000 = 6000$
2	300	$C_{close} = 6000 + 4500 - 4500 = 6000$
3	800	$C_{close} = 6000 + 12000 - 7000 = 11000$

Use the evidence

Carry each closing balance forward. Month 3 leaves no initial capacity allowance for interruptions.

Investment recovery is a separate question

Operating break-even

Monthly contribution covers monthly fixed operating cost.

300 cups is the threshold in this scenario.

Recover the setup outlay

If 3,000 yuan cash surplus repeats unchanged: $12000/3000 = 4$ months.

Sales, costs, withdrawals or new investment change that recovery scenario.

Practise changes to the budget and credit assumptions

- 1 **Cost change** Monthly living costs rise by 500 yuan.
- 2 **Annual effect** $\Delta C_y = 12\Delta C_m = 12(500 \text{ yuan}) = 6000 \text{ yuan}$.
- 3 **Revised spending** $C_y = 205000 + 6000 = 211000 \text{ yuan}$, before reserve and deposit.
- 4 **Review** Recalculate the chosen reserve too. Keep suitability, credit cost, affordability and APR separate.

Your turn: lower-demand month

Your turn

Month 2 opens with 6,000 yuan. Cups sold fall to 200, price stays 15 and ingredients cost 5 per cup. Fixed cost stays 3,000. With immediate payment, find closing cash and interpret the lower-demand result.

Attempt the complete task before advancing. Show the method and interpret the result.

Check yourself

1 **Changed demand** Month 2 sells only 200 cups; it opens with 6,000 yuan.

2 **Receipts** $R = pQ = (15 \text{ yuan/cup})(200 \text{ cups}) = 3000 \text{ yuan}$.

3 **Payments** $\text{payments} = vQ + F = 5(200) + 3000 = 4000 \text{ yuan}$.

4 **Closing**

$$C_{\text{close}} = C_{\text{open}} + R - \text{payments} = (6000 + 3000 - 4000) \text{ yuan} = 5000 \text{ yuan}.$$

Decision

Review demand, staff absence, service time and cash before expansion.